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R. K. Mautz
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ACCOUNTING EDUCATION IN REVIEW*

LAWRENCE M. WALSH
Partner, Haskins & Sells

PERHAPS never before in the history of our country have the problems of education received broader attention than they are receiving today. The advent of our new space age, with its sputniks, mutniks, explorers, and the like, has captured the interest of teen-age and even pre-teen-age rocket builders. At another level, it has resulted in broad inquiry into the teaching of mathematics and the physical sciences.

Teacher shortages resulting largely from failure of school administrations to match the attractive salaries available in other professions, and the high cost of expanding facilities to meet increasing enrollments, have brought to every taxpayer at least some of the problems confronting today's educators.

New teaching aids and techniques made possible through modern projection equipment and even through television have added to this heightened interest in education.

These are only a few of the factors causing so many groups to have a new interest in what our schools and colleges are doing.

For somewhat different reasons, education for accounting also stands in the spotlight of public attention.

We would expect an academic journal such as THE ACCOUNTING REVIEW to be replete, as it is, with articles on accounting education. Within the last few years, however, as only a cursory review would reveal, a great number of articles on the subject have appeared in *The Journal of Accountancy*, *The Controller*, *The NAA Bulletin*, and the various state CPA magazines, giving evidence of deepening interest among the practicing profession in education for accounting. Considerable breadth was given to this interest, of course, by the recent report of the Commission on Standards of Education and Experience for CPAs—the report generating, as we all have seen, considerable light and more than just a little heat.

Coupled with this new interest has been expanded educational activity in the professional accounting organizations. As just one example, The American Institute of CPAs has recently established a Division of Professional Education and it now has a very ambitious program designed to further the professional education of aspiring young accountants, and of seasoned practitioners as well.

We might ask ourselves whether one would correctly infer from this trend that

* This paper was presented at the annual meeting of the Association at the University of Colorado on August 25, 1959.

EDITOR'S NOTE. "Education for Business," a paper presented by Mr. Allan Cartter at the same session, was not made available for publication in THE ACCOUNTING REVIEW.

our universities in the past have failed to realize, or to achieve, their proper mission in accounting education. I would be among the first to refute such an inference, choosing to believe, as I hope you do, that our educational background reasonably qualified us, at that time, to take our respective places in the accounting scheme of things.

Why then, if this is so, has there been so much discussion in recent years of the adequacy of collegiate accounting programs. Isn't it simply that the old order has changed, giving way to a new and, happily, a broader vision of the role of the accountant, his proper function, and his potential for further advances in importance and prestige in our business, civic, and social communities?

Any discussion of the present or future of accounting education must recognize the position to which the accountant has advanced today, and, more importantly, where he might be expected to be tomorrow. Today, beyond any doubt in my mind at least, the accountant has surpassed those in all other professional groups in becoming the foremost advisor to business. As such, he is now called upon to counsel on matters and to serve in capacities not generally considered within his normal competence until recent years. I think we all expect this trend to continue. If it does, the adequately educated accountant of the future must have greater breadth and greater depth of understanding of the many facets of business.

Recognition of this has led to widespread consideration of additional years of academic preparation for a career in accounting. I do not wish to impose on you a discussion of graduate programs, or of five-year programs and the like. These are well covered in our literature and other forums, and will continue to be.

I believe that none of us wishes to impose additional years of academic preparation on aspiring accountants unless, after the potentialities of the four-year program have been fully realized, it proves insufficient. Mounting costs of education, the increasing problems in attracting qualified faculties and in maintaining adequate facilities, and the probability that the four-year program is likely to be with us for some time to come indicate, at least to me, the need for further thought on what can be done within the framework of a four-year program to keep up with the changing needs of accounting education. It can therefore be hoped that while experiments continue in five-year programs and the like, there will continue to be searching consideration of maximizing accomplishments within the present four-year program.

So you will understand my viewpoint, I shall mention some correspondence I had with Professor Fertig when we were considering the respective areas that our papers at the annual convention might cover, particularly concerning the attitudes of employers. We agreed there was possibly some tendency for employers to prefer the connotations attached to stating a preference for the "broadly educated, well-rounded, young man with breadth of vision, judgment, etc." while continuing to seek and to employ the highly trained technician. I believe this seeming inconsistency would not exist, however, if "broadly educated" accounting majors were available in numbers, and I believe this for these reasons:

Even the so-called "highly trained technician" requires extremely close supervision during his first few years of work. The experience he gains during this period, together with efforts toward self-improvement in his leisure time, are likely to produce considerably more of the technical competence, in the narrow sense, that is required in his early years of work than the undergraduate accounting curriculum is likely to produce. The technical knowl-

edge, again in the narrow sense, required after several years of experience is difficult to teach to a student who has had no experience; this process may better be undertaken by the employers than by the universities.

Considering the students' maturity and experience, the faculties and facilities available in the universities, the pressures of time, and parallel matters, a proper division of the responsibility for preparing students for accounting careers—as between the universities and the employers—should be based upon what each separate group can do most effectively. I believe the universities can deal more effectively with broad and basic concepts and principles, emphasizing the relation of the accounting function to all other aspects of business, economic, political, and civic environment, and thus preparing the student to be a thinking and learning man; this accords with my layman's concept of the proper function of a university.

At the same time, methodology and specific techniques can, I believe, be imparted more effectively by the employer. Since this is done as an integral part of the employee's daily job activities, a substantial saving in time and effort is effected.

I grant that the universities must devote sufficient attention to mechanics and techniques to provide the necessary background for understanding the basic concepts. As to techniques, happily, this same limited knowledge is all the junior accountant needs to get off on the right foot in his initial employment. Thereafter the required technical competence in the strict sense will be gained through his in-service training and outside study. The foregoing represents the views of at least one public accounting employer.

Now most of you are educators and it would be presumptuous of me to tell you how to run your business. In a sense, however, practitioners are your customers, and as such customers here is what some of us think about your merchandise.

There is little question that the majority of college-trained accounting students have acquired a satisfactory knowledge of rudimentary accounting and auditing techniques. They seem also to have had a reasonably good balance of exposure as between general accounting theory, cost accounting, auditing, taxes, and so on.

The students we interview show, almost universally, a great deal of enthusiasm for and interest in accounting and auditing. They are generally well oriented toward a goal they will strive to achieve in their accounting careers. This speaks well of the counsel and guidance their professors have given them. A large number of students—in their personality, attitude, aptitude, and other important personal qualifications—seem eminently well-suited for a career in accounting. This is to the credit of professors of elementary accounting who have encouraged so many good students to major in accounting.

There are some respects, however, in which we think we could hope for an even better calibre of young accounting graduates. I shall mention these under four headings relating to what I think might be done to achieve the desired results. If in these comments I seem to encroach on your prerogatives, I trust it will be clear that I make them simply for the purpose of pointing up the result to be sought.

A More Liberal Approach

Many accounting students seem to have a tendency to hold fixed ideas about how certain things must be done, with seemingly little appreciation of the fact that under appropriate circumstances alternative and equally effective ways may exist to accomplish the same end.

The techniques that have been learned have been well learned, but perhaps they

have been too well learned in the sense of being committed to memory without an understanding of their real nature and purpose. Often there is evidence that students too infrequently have been required to make decisions necessitating any appreciable degree of judgment. This, coupled with what frequently appears to be a complete absence of inclination to engage in research on a difficult question, indicates that accounting and auditing in some cases are perhaps being taught as if they were rigid mental disciplines, as inflexible as the multiplication tables or the conjugation of a regular verb.

Many students have only slight acquaintance with current developments in their chosen field. It is understandable that textbooks cannot be revised every year or two to bring them completely up to date. At the same time, I would judge from the evidence that current accounting books and periodicals in some college libraries must be put to little use from one semester to the next.

These conditions all suggest the need for a more liberal approach to the teaching of accounting.

To me, the term "liberal" as applied to study of accounting implies emphasis on the nature and purpose of accounting; study in depth of its underlying principles; study of the relation of the accounting function to all other aspects of business enterprise; consideration of what is being done in accounting; and imaginative consideration of what can be done. Emphasis on matters of this kind should help accounting students to develop their ability to reason logically, to exercise sound judgment, to develop intellectual curiosity, and at the same time should help them perceive the broadest implications in all accounting data. In short, such emphasis should foster those qualities of mind traditionally associated with the objectives of liberal education. Surely a student's thinking processes can be stimulated as broadly and as deeply in the study of a subject as intricate and dynamic as accounting as they can, for example, by the study of Greek history from 400 to 300 B.C.

Perhaps the first accounting courses, which now usually deal principally with bookkeeping procedures, should be somewhat revised. I recognize that expediency will often require both the accounting major and the non-accounting major to take similar sections in the elementary accounting course. But this should not cause a problem, for, in both cases, I should think, the first exposure to accounting should consist of studying the basic principles underlying the whole accounting spectrum, of developing an understanding of the terminology used in internal and external financial statements, of learning how to interpret these statements, of learning how accounting can be used as a control over nearly all the activities of a business organization, and similar matters.

Going on to the advanced courses in principles, cost accounting, managerial accounting, auditing, and the rest, the greatest emphasis should be given to why things are done and to alternative ways of accomplishing various objectives.

I think that as part of a program to liberalize accounting subjects, a great deal of the student's time should be spent in outside reading, both in the current literature and in other sources outside the text around which the courses basically are built. One of the incidental, and extremely important, benefits the student should derive from a heavier program of outside reading would be that he would be better prepared for the rigorous pace he must maintain in practice. He will be expected to work a full day every day of his professional life, and then spend countless hours keeping abreast of developments, preparing for the CPA examination, and perhaps later undertaking some research on his own that will lead to his contributing

something new to the body of accounting knowledge.

In this connection I feel obliged to say that we may be doing an injustice to accounting students in not giving them more work than seems to be the general practice today. True, some of our present accounting majors would be unwilling or unable to carry a substantially heavier load, but shouldn't they discover this fairly early in their college years so that they can plan to shift to another area of study? Students unwilling or unable to carry the heavier load are not likely to take full advantage of the opportunities present or to enjoy any reasonable degree of success in an accounting career.

An essential feature of a more liberal approach, in which there would be considerably less emphasis on mechanics and techniques, would be a drastic reduction in the amount of pencil-pushing. Once a man has learned to take off a trial balance or prepare a journal entry, putting debits and credits on the proper sides of the journal, it seems to me to be some waste of valuable time for him to repeat the process again and again in writing solutions to problems and in preparing audit practice sets. He will have considerable practice in performing these and other operations many times even in his first few months of work after graduation, and his long-range progress will not be impeded if he has not achieved a high degree of proficiency in doing these things prior to his first job assignment. Perhaps in some cases a great deal more benefit might be derived from the student's observing several different working papers relating to a particular problem, which he might be able to review, say, in an hour or two, than from his spending the same amount of time laboriously drafting a single solution of his own.

As it concerns accounting majors who intend to enter public accounting, the approach I suggest should fit in very nicely with the American Institute's program of continuing education now under development. That program should fill the gaps that might result, from a more liberal approach, in the knowledge of mechanics and techniques necessary to good performance in early job assignments. The habit of independent study that would result should better equip the student to take full advantage of a continuing education program.

You might ask at this point whether any appreciable reduction in the required number of written answers to typical college accounting problems would result in increased difficulty in passing the problems section of the CPA examination. Let me answer such a question by asking whether a university does not have a more important mission than to prepare a student to pass the CPA examination. Also, would not any difficulty in writing the problems section of the examination that might result be more than offset by the broader and deeper understanding that the student would have acquired of the whole range of accounting knowledge? In any event, after his first several months of work following graduation, he will have done more paperwork in his daily job assignments than conceivably could be done during the full course of an accounting major, so his full preparation to write the problems section of the examination would in all likelihood not be unreasonably delayed.

Integration of Subjects

Consideration needs to be given, I believe, to the possibility of achieving a closer integration of all the accounting courses with the other business subjects.

Too often, students seem to have completed a full accounting major without really understanding that accounting is not an end in itself, but merely a means to an end. They seem not to understand that accounting questions very often cannot be resolved by reference to an immutable set

of principles, but must be resolved in light of the use to which the particular accounting data will be put.

Too few of the students seem to have given much thought to the relation between accounting and, for example, corporation finance, between accounting and production management, marketing, and the like, between accounting and business law, between taxation and public finance. One is led to wonder whether impenetrable walls have been built between classrooms, confining each professor to his particular subject, and precluding consideration of the inter-relation between his subject and the other business subjects the student is studying.

This situation may indicate a need for closer integration of the study of accounting and the remainder of the business school curriculum. Perhaps a professor of accounting is always going to be a professor of accounting, and a professor of finance always a professor of finance, and perhaps the twain shall never meet. Undoubtedly there are many obstacles to bringing the two closer together. Nevertheless, if each recognizes the desirability of integrating the material in their respective courses, I feel confident that their resourcefulness would eventually result in finding an answer to this problem. If that time comes we should find, for example, that a student studying depreciation methods will at the same time study the factors that influence a decision as to what particular methods are best suited to various business situations, relating the choice to the enterprise's long-range fiscal policy, considering the effect on pricing policies, the tax effects, pertinent government regulations, and the like. Similarly, in studying forms of business organization, he would concurrently be considering the accounting procedures, the tax problems, the legal requirements, etc.

With such an academic background, I think we could expect young accountants more easily to develop a breadth of knowledge of all those aspects of business that accounting touches and thus to realize fully the expanded potential for the profession mentioned earlier.

Need for More Realism

Another matter I wish to comment upon relates to what, for want of a better term, I shall call a lack of realism. This pertains primarily to the auditing course.

The graduates of most universities give evidence that their auditing courses have been taught by professors who have had at least some working experience and that it has helped them promote greater understanding of their subject on the part of their students. I think substantial benefits would derive, however, if the auditing professors had considerably more work experience in practice than most have had.

For example, we find that many students have little understanding of the concept of materiality. Perhaps the auditing course is not taught against a background of understanding of the use to which the auditor's findings will be put.

Further, while all the students have been exposed to the concept of internal control and have some notion that the existing degree of internal control will have an important bearing on the nature and extent of auditing procedures, very often students have only the haziest understanding, if any at all, of the many aspects of a business situation tending to add strength or create weakness in internal control. They could readily prepare long lists of specific procedures that could be followed, for example, in auditing accounts receivables—lists that would be word for word, one suspects, as they appear in an auditing text.

Now no one would expect an inexperienced student to be able to select appropriate procedures and apply them with the same degree of judgment that an experienced man would use. However, the young

college graduate too frequently lacks much comprehension of where one might even begin in selecting the particular procedures appropriate to a given situation, and in deciding upon an appropriate extent for their application. Students also display lack of imagination in developing variations of procedures to meet unusual circumstances. These situations could be improved if professors of auditing had broader and more varied experiences in practice and were able to draw more fully on actual case material gathered in the course of gaining their experience.

Our Association, as most of you know, has a committee that is attempting to assist professors and employers in arranging so-called faculty residency programs. A limited number have been arranged, but the number is too small, and sometimes the periods too short, to have had widespread impact. I strongly urge further consideration of this problem, and particularly suggest trying to work out a joint effort with the other professional groups, such as the American Institute of CPAs, the Controllers Institute, the National Association of Accountants, and the Institute of Internal Auditors for supplying case materials for use in college courses.

Calibre of Students

I mentioned as one of the strengths of our accounting departments the high calibre of some of the graduates, in terms of interest, attitude, and orientation toward their chosen field. True, nearly all the students I meet are high on interest and attitude and have been well oriented. If these were the only requisites, most of them could hope to have rewarding and satisfying careers in accounting. As to aptitude, however, while I do not know what the record would show as to present status of the majority of accounting graduates, I must guess that a substantial number have lacked the necessary aptitude to enjoy enough success in an accounting career to justify their having spent the equivalent of a full year of college study in an accounting major.

I fear, and I think you do also, that we are not getting a full share of the better students. We are losing too many to engineering and the sciences, and perhaps to other departments in the business school.

Our Association has taken a great interest in this problem and about two years ago produced its pamphlet "Young Eyes On Accounting" which has attracted widespread interest. More recently, through Professor Kenneth Perry's efforts as Chairman of our Committee on Student Personnel, there has been established a joint national committee consisting of representatives of several national professional groups of accountants, to explore ways and means of cooperative effort in attracting the better high school students to consider an accounting career. While I do not regard it as a primary responsibility of accounting professors to attract good students, I hope and trust that when a workable program evolves from the committee's efforts the members of our Association will take a leading part in its implementation.

Conclusion

If we can attract to collegiate accounting programs a fair share of talented students, and expose them to professors well qualified both academically and practically in courses reasonably designed to accomplish the types of objectives traditionally associated with a liberal education, it seems to me we can have great confidence that our practitioners of the future will continue toward achieving the pre-eminent position now envisioned for our profession. I believe, too, that the realization of these broader goals is being accepted jointly both by the teaching and the practicing professions.

ORGANIZATION OF AN ACCOUNTING PROGRAM*

PAUL E. FERTIG
Professor, The Ohio State University

I HAVE been given the assignment of responding to these friendly critics of business education, of giving the views of at least one professional educator on the suggestions made by Mr. Cartter and Mr. Walsh on business education in general, and on accounting education in particular. I think it may be particularly appropriate for me to be discussing this subject, because I believe I represent a school which has an accounting program occasionally characterized as "technically-oriented" or "CPA-dominated," and which annually pours out scores of undergraduates, many of whom take their places as junior accountants in the large CPA firms, with perhaps a minimum of adjustment. I doubt if I can be accused of being unduly sensitive simply because I believe that the Gordon and Pierson reports, as well as many of Mr. Walsh's comments, were directed specifically at programs like the Ohio State program. For this reason, I would like to use the Ohio State program as a case study.

If we are going to make changes in our accounting programs, we ought to have a long-range objective of some kind. Mr. Walsh has been very careful to avoid recommending specific solutions to the problems he raises, but the Gordon and Pierson reports come up with more definite recommendations on what they think we ought to do. At the risk of repetition and oversimplification, let me summarize them as follows:

For the non-accounting business student, they recommend:

1) A liberal arts undergraduate degree.

2) An MBA program in which the courses draw more heavily on the underlying theoretical disciplines.

3) Preparation for a business career, as distinguished from a first job.

4) To establish a tradition of scholarship founded on basic research, as distinguished from the "nose-counting" kind of thing which at best helps us to find out what is going on in the business world. It is precisely this kind of research which leads to the ten-year lag referred to by Mr. Cartter.

When the reports deal specifically with accounting, however, they treat it as a problem of special difficulty, caused by CPA requirements, which should be solved by adding the fifth year. Since this presupposes an undergraduate business degree with at least a fairly substantial major in Accounting, it would seem that the recommendations applicable to non-accounting business students do not apply to accountants.

In fairness to the Gordon and Pierson reports, I would suggest that the recommendation for the fifth year for accountants was not intended to be interpreted as an "ideal" solution for accounting students in the same sense that the MBA program is considered "ideal" for other business students, and has been suggested instead as merely a step in the right direction. Furthermore, Messrs. Pierson and Gordon are by no means the only ones who consider accounting education as a special problem which perhaps should not

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be judged by the same criteria as education in the other business fields. Most accounting teachers feel this to some degree. For example, I believe it is this idea which provides the basis for the recommendation for the professional School of Accountancy, considered independent of the Graduate School of Business. In any case, there are few who would disagree that the addition of the fifth year would be a help. By implication, Mr. Walsh agrees when he suggests that universities have have more important responsibilities in four-year programs than work directed toward the CPA exam.

If the five-year program is not suggested as the "ideal" program for prospective accountants, what is the ideal program, and how does it differ from that suggested for non-accounting business students? We must answer the question: "To what extent is accounting a special case, and how should this be reflected in accounting programs?" I think our first two speakers have given us the answer. Note, for example, Mr. Cartter's description of the position of the industrial accountant in our large and medium-sized corporations—"a key figure in methods of control, data processing, internal communication, financial planning and forecasting." He is indeed all of these things. What will his responsibilities be in the 1970's? Or, putting it another way, what sort of educational program will permit the industrial accountant to expand his sphere of responsibilities in the next fifteen years as much as it has expanded since World War II? What basis is there for suggesting that the controller can get along on a less broad, more highly specialized background than his fellow members of the management team?

Can the CPA of the 1970's afford to get along on an educational program which is less broad than his counterpart in industrial organizations? Note Mr. Walsh's comment: "The accountant has surpassed all other professional groups in becoming the foremost advisor to business." Is there any basis for saying that the CPA requires less grounding in, for example, the behavioral sciences than the manager he advises, and on whom he may pass judgment?

Where does the ground work leading to facility in mathematics fit into the five-year program for accountants? The accountant of the future, because of his specialty in quantitative controls, will be expected to have a more thorough grounding in Numerical Analysis, Mathematical Statistics, and courses involving operations-research, than perhaps any of the other specialties in the management group. Certainly it cannot be less, or, as Mr. Cartter has already mentioned, he will be displaced by others who have this ability. As a bit of evidence which may help describe the magnitude of this problem, I might point out that Ohio State's course in Numerical Analysis requires Differential Equations as a prerequisite.

When you add these arguments to the educational objectives of Mr. Walsh, the conclusion is, I believe, inevitable and obvious: the accountant of the future must have an educational background which is every bit as broad as the background of the prospective manager. If we can agree that the approach to business education outlined by the Gordon and Pierson reports is proper for those preparing for non-accounting fields, it must also be proper for those who are preparing for accounting careers. Any goals short of this which we establish for ourselves, any concessions we make in favor of our accounting specialties, will tend toward educational programs which will fall short of the objectives outlined by Mr. Walsh. Any steps we take which have the effect of pulling accounting education away from the business framework in which it has its

origin, are, in my opinion, steps in the wrong direction.

This means that the "ideal" educational program for professional accountants, established within the framework recommended by the Gordon and Pierson reports, would consist of an undergraduate program in the liberal arts, a two-year program in business (MBA), followed by whatever professional accounting work might be considered appropriate for the university to offer. It means that the accounting we would offer in the business school would be limited to that necessary for all business students, perhaps a one-year course, plus some specialization which would be sharply limited compared to the amount now offered by schools like Ohio State. This specialization might well be a second one-year course offered during the second year of the MBA program.

Additional work in Accounting at the professional level is a long-run problem which should be the joint responsibility of university accounting faculties and professional development programs, such as the one now being developed by the American Institute of CPA's. It is likely that some of this work will fall to the universities, and may call for the organization of a professional School of Accountancy which would assume the MBA program as a prerequisite. It is to be assumed, however, that as professional development programs expand, they will take over a substantial portion of the technical accounting work which is now thought of as the responsibility of the university. This may well include, for example, preparation for the CPA examination.

Having established the long-range destination, we must now turn to the kinds of changes which seem to lead in this direction. For this purpose, I prefer to use the Ohio State program as a case study, if for no other reason than the fact that it is the only one with which I have had experience as a teacher.

The changes I will mention are not drastic changes. Some of them might better be considered as correction of faults which many schools have never committed in the first place. However, they do offer proof that change is possible and is taking place, even in the large state universities, where change is made with greatest difficulty. Moreover, discussing these changes gives me the opportunity to indicate why I believe we haven't done more than we have, and to point out some of the obstacles which will have to be removed along the way. Finally, in spite of the fact that these changes are extremely modest, the direction of the change is unmistakable.

First, Ohio State has adopted a university-wide requirement of 45 quarter hours in basic education, consisting of 15 quarter hours each in the Humanities, Natural Sciences, and Social Sciences, to be completed in most cases in the first two years. This is a far cry from the recommended objective of an undergraduate degree in the liberal arts. Furthermore, the 45-hour requirement is made up primarily of beginning courses in the various "liberal" subject-matter areas, and the student has such a wide range of options from which to choose that the requirement comes close to a system for enforced electives. We must remember also that accounting teachers are not the only teachers who seem to assume, in the first day of the first course, that every member of the class will become a professional in the particular subject being taught. This means that the next step is the development of liberal arts courses designed to provide a more meaningful background in the theoretical disciplines. This work is now going on at Ohio State. The step following this will, in all likelihood, be expan-

sion of the number of hours devoted to undergraduate basic education.

It seems to me that the requirement of an undergraduate degree in the liberal arts is by no means an automatic guarantee that the student will come to the business school with any particular degree of intellectual maturity or analytical ability. A conventional course in Accounting Principles will, it seems to me, be at least as broadening, and a great deal more analytical, than a course in Stage Lighting or Basket Weaving. There are, it seems, all sorts of liberal arts undergraduate programs, and not all of them may be appropriate as background for the graduate school in business. We would, of course, be grateful for the preliminary screening of students that the liberal arts undergraduate program would provide, but this is not in itself justification for requiring it.

These are our reasons for continuing to offer an undergraduate degree in business with a major in Accounting, and we have no immediate plans for abandoning this program. What we must do is to begin to study carefully existing undergraduate programs in the liberal arts, to determine for ourselves what they may accomplish, compared to what we accomplish now. This should not be interpreted to mean that we must all begin work on the design of a "pre-business" program to be offered in the Arts colleges. It means simply that there is strong reason to believe that some areas of the liberal arts are as highly professional as some of our undergraduate programs in business. If and when we decide, however, that a liberal arts degree is proper background for the study of business, we must make no concessions in the form of premature specialization for accountants.

Second, the Ohio State College of Commerce adopted, several years ago, what we call "core" programs, both in its undergraduate business school, and in the MBA program designed for those with non-business undergraduate degrees. These core programs are made up of blocks of basic business and economics courses designed along the conventional functional lines, and as such possibly fall short of the recommendation that business programs offer courses in which the functional fields are integrated one with another, with the behavioral sciences in particular, and also mathematics and statistics in certain instances. Nevertheless, the purposes of the core courses are to provide a background which places business in a modern social, political, and economic framework, and to place limitations on the hours which might otherwise be devoted to specialties in the functional fields. These purposes seem to be entirely consistent with the objectives recommended for us.

It would seem that the next step here is to redesign these courses to provide a greater degree of integration of subject matter areas, to stress inter-relationships among them and particularly to draw more heavily on the underlying social sciences. Here we run head-on into the departmental barriers which have grown high and thick in many of our larger schools. Not too many years ago our Accounting department used to get very upset when word reached us that something that sounded like Accounting was being taught in a Management or Finance course. Now we simply retaliate by teaching Management and Finance in Accounting courses. This in itself is perhaps progress in breaking down the barriers, but all it produces is duplication, and not the "broad integrated courses based on the more theoretical disciplines."

It is a well-known fact that the tendency to specialize, and to build empires, is built into all of us. As college teachers, we have found that it is the way to get raises and

promotions. Developing more and more courses in our specialties is an almost irresistible temptation, because we believe that the specialty is the most important subject there is, the courses are easy to teach, and we never run the risk of finding a student who knows more than the teacher. I believe that the development of courses contemplated by the Gordon and Pierson reports will require either a complete transformation in thinking on the part of most college faculties, a miracle not likely to take place soon, or an entirely new breed of professor. The hiring of social scientists and mathematicians by some business schools is certainly commendable, but how many of them are there available? It is analogous, let us say, to attaching an accounting teacher to the staff of an Engineering or Agriculture college. We might agree that they ought to have one, but who among you would take the job?

Third, the change recommended by Mr. Cartter to which there is the least opposition relates to the course in Accounting Principles, usually required of all business undergraduates. For years the general philosophy has been that the student must learn to "walk before he can run," that the place to start is at the beginning, and that the beginning is bookkeeping. I realize I am on touchy ground here, and, to protect myself, I refuse to define "bookkeeping," but I will admit that I define it far more broadly than most conventional texts define it. I include in it, for example, the determination of how much bond discount to amortize, and the distinction between the reserve method and the sales method of accounting for bad debts.

At Ohio State we are developing a course in Accounting Principles which approaches accounting from the standpoint of the user of financial statements. Discussion of bookkeeping will be limited to that necessary to demonstrate that balance sheets and income statements come about as the result of the recording of transactions and conditions appearing during the period, and why both sides of the balance sheet inevitably add to the same total. The course will cover two quarters: the first quarter dealing with "outside" users of published data, the second with the users who have management responsibilities. The principal emphasis in both courses is given to what the statements are for, their limitations, and the reasons for the limitations.

Most schools have courses of this kind in their bulletins, but in most cases they are offered as terminal courses to students who do not intend to go on in Accounting. With a few important exceptions, we find the course offered to non-business undergraduates, or in non-accounting MBA programs. We propose to offer this course as a first course to all students regardless of the curriculum they intend to follow, which means that the course must be made equally appropriate for accounting majors as it is for non-majors. It seems logical to say that a thorough-going course in what accounting contributes to society and to management, why it is what it is, what it is for and is not for, is equally important for the accounting major. It will provide him with a sense of direction for his study at a higher level.

Furthermore, there is something to be said for the argument that the conventional course in Accounting Principles tends to attract, as potential majors, the students who enjoy the orderliness of bookkeeping, the students who like definite answers, and who prefer not to worry about whether the answers are useful. I suggest that these students may not be the ones we want. The really intelligent, imaginative student may be repelled by his first course in Accounting. The only way we now attract the student with high

potential is by promises of better things to come, promises which often we find difficult to keep.

Developing this course is not without its problems. As you might imagine, the main difficulty is the lack of a textbook designed to fit the particular pattern we have in mind. A number of excellent books have come out in recent years, but the ones designed for MBA programs assume a background and degree of maturity our sophomores do not have. Others, apparently designed for survey courses, cover too many isolated topics too thinly to suit our purposes.

Another difficulty is the fact that our accounting majors need additional technical work as a prerequisite to somewhat more conventional courses in Advanced Principles and Cost Accounting, normally taken in the junior year. To solve this problem, we are designing a one-quarter course entitled "Accounting Methods." Time does not permit outlining the details of this course, except to say that it bridges the gap between the non-technical first course and major courses, and that it will be limited primarily to potential accounting majors. We are confident that, under this arrangement, the major in Accounting will be better prepared for his junior and senior work than he is now.

One additional point must be made about the Methods course. It will cover a lot of ground in a relatively short time. It will serve both as a course to screen out the weak sisters who may have survived the first course, and as a course which will at least test, and we hope help develop, the student's analytical ability. We are not willing to reduce the amount of fairly rigorous discipline which has long been characteristic of accounting programs.

I will be somewhat surprised if this rearrangement of the sophomore program does not have the effect of reducing the number of accounting majors. We trust, however, that the reduction will be at the lower end of the point-hour scale.

Fourth, another change now on the drawing board involves the course in Advanced Principles, which has always followed fairly well the pattern outlined in the conventional advanced textbook. This course will be replaced with a course which will cover the problems of income determination, asset valuation, financial statement analysis, and corporate equities at a depth considered appropriate for accounting majors. The only subject retained from the old course will be consolidated statements, on which the emphasis will be sharply reduced compared to the course we have now.

This change is being made largely to correct what many of us have considered a long-time deficiency in our program, but whatever our reasons may have been, the effect of it is to substitute basic theory for what I would characterize as advanced techniques, which we have always thought necessary because of the requirements of the practice section of the CPA exam. At the moment, we have no specific plans for coverage of these topics elsewhere in the program.

Furthermore, if and when we get to the point of limiting the area of specialization to, say, 6 semester hours in one of the functional fields, as recommended in the Gordon and Pierson reports, it is this kind of course which I would offer in this 6 hours. Not only does financial reporting to outsiders continue to be the "bread and butter" of accounting, but it is also the most controversial, and the area in which we have the most obscure, ill-defined criteria. The attempt in this course would be to develop a critical attitude on the part of students, to get them to question the reasons given for accounting principles as they are.

I believe that the conventional approach to accounting theory may have the effect of "brainwashing" the student so thoroughly with "generally-accepted" accounting that by the time he gets to the graduate seminar in which the basic tenets are questioned, his ability to criticize seems to be limited to criticism of those who criticize accounting. The questions we all have about accounting principles must be brought to the student's attention early in his accounting work, and not in the final stage.

Fifth, we have reduced the number of required quarter hours devoted to undergraduate accounting from 47 to 44 for accounting majors, and from 15 to 10 for non-majors. These are modest reductions, but it may be important to note that they have come about entirely as a result of our own examination of our own work, without any pressure being exerted by the college or the university. These changes are applauded by our non-accounting colleagues, but the empire-building in reverse is so completely out of character that I am sure that many of them are wondering what our real motives are.

I have not developed completely an organization for an accounting program in this talk, and have therefore fallen short of the objectives implicit in the title I was given several weeks ago. To suggest that there is some "ideal" program to which all schools should conform is perhaps unwise, particularly in the absence of more objective criteria by which programs may be judged. What is needed more than anything else is imaginative experimentation, perhaps along several different paths by different schools. If I have interpreted correctly the comments of Mr. Walsh, and the recommendations of the Gordon and Pierson reports, then I believe that a general direction for this experimentation has been established, and it is this direction, rather than the ultimate goal, which I have tried to emphasize.

THE ROLE OF EDUCATORS IN THE AMERICAN INSTITUTE'S PROFESSIONAL DEVELOPMENT PROGRAM*

LOUIS W. MATUSIAK

Director, Division of Professional Development, American Institute of Certified Public Accountants

BECAUSE of the widespread importance of accounting in the business world today, those in the public practice of accounting assume professional responsibilities. Professional persons have an obligation to render to the public the best services currently available. Lawyers, doctors, dentists, and other professional groups long ago recognized this obligation.

Most of these professions decided that a continuing education program was essential to the fulfilling of this obligation.

Most of these groups consider the task of continuing education too great for individual effort alone. Formal programs are necessary. Elmer G. Beamer, in a recent *Journal of Accountancy* article, reported that the other professions considered such a program as essential because: (1) in a true profession, continuous study "is needed" to keep abreast of the constant flow of new materials, theories, and practices; (2) such programs are needed to permit the practitioner with less formal education than others to do some catching up; and (3) perhaps most importantly, these programs permit professional assimilation of the best practices and of the proved ways of achieving them.[1]

I would assume that everyone familiar with accounting agrees that accounting also is an ever-changing, ever-increasing body of knowledge. Concepts and procedures are changing continuously; the scope of public practice is broadening steadily. The work of the CPA of today is vastly different from that of the CPA 25 years ago and probably will have little resemblance to the work of a CPA 25 years from now. Business becomes increasingly complex; management of today relies heavily on accounting data for decision making; widespread ownership of corporate stock helped revolutionize the place of accounting in business; and government, through regulation and taxation, promoted our art from enlisted man bookkeeper rank to commissioned officer accounting status. This progression continues. To keep our members current, the American Institute of Certified Public Accountants believes that "continuing education on a much broader scale than has been available in the past will be required if the profession is to meet its responsibilities and take full advantage of its opportunities."[2]

There are some who argue that fulfillment of this obligation is a personal responsibility and not one of the profession as a whole. Many others believe as I do, that the era of the self-made man has ended.

The late Robert L. Kane voiced the opinions of many when he said, "Each professional man assumes the obligation of maintaining and extending his competence during his entire professional career. While

* This paper was presented at the annual meeting of the Association at the University of Colorado on August 26, 1959.

[1] Elmer G. Beamer, "Continuing Adult Education for the Public Accountant," *The Journal of Accountancy*, Vol. 106, No. 5, p. 69.

[2] Editorial, *The Journal of Accountancy*, Vol. 103. No. 1, p. 28.

basically that might be an individual responsibility, the professions have concluded that their organizations have an opportunity, and probably a responsibility, to assist and encourage their members to engage in systematic and continuous efforts at keeping abreast of developments and expanding their knowledge and competence."[3]

Subsequent events have proved that the decisions of the other professions to embark upon formal continuing education programs were wise decisions. The legal profession, through the combined efforts of the American Law Institute and the American Bar Association, reports that it has sold more than one-quarter of a million sets of continuing education materials. In California alone, in 1958, nearly 14,000 of the 18,500 members of the State Bar of California enrolled in its formal programs.[4]

The American Medical Association's extensive continuing education program has also been well subscribed. Dr. J. S. DeTar, at the 1958 annual meeting of the American Institute of Certified Public Accountants, reported that, in 1957, the AMA sponsored over 1,000 courses, with an enrollment in excess of 35,000. Another 30,000 members participated in other forms of post-graduate education—making a total of 65,000 doctors who actively pursued a formal program of personal development. These statistics are even more impressive when one considers that there are only 150,000 physicians in active practice.

The American Institute of CPAs initiated a formal continuing education program in 1956. It was a modest beginning, requiring only a part-time director. Under his auspices three courses were produced, Report Writing, Tax Practice Administration, and Accountants' Legal Responsibility. Last year, the Council of the Institute authorized the expansion of these activities. In December 1958, the continuing education function was transferred from the Education Division of the Institute and made the sole activity of the newly created Division of Professional Development. At present, in addition to a director, the division employs or will shortly employ three technical assistants, an administrative assistant, and a secretary. Two new courses have been developed and more are in process.

The cumulative results of these efforts to date are:

1,529 enrollments in the Report Writing Course
579 enrollments in the Tax Practice Administration Course
446 enrollments in the Accountants' Legal Responsibility Course
199 enrollments in the Seminar on Accountants' Fees
34 enrollments in the trial-run Seminar on Budgeting for Profit in Small Business,

making a total enrollment of 2,787.

The paucity of these figures, bearing in mind that there are an estimated 65,000 CPAs in the country today, highlights the selling job that must be done. Too many accountants believe that their formal education ends with graduation from college. Others might concede that passing the CPA examination is their exodus from formal education. It should be more properly viewed as the genesis of professional education.

Permit me now to explain briefly the mechanisms with which this program will be developed and administered. Course materials will be produced in a variety of ways; some will be produced by handpicked experts in their specialty fields. These specialists will be drawn from the ranks of practicing public accountants, industrial accountants, and accounting educators. The best person available will be awarded the contract to produce the

[3] Robert L. Kane, "Education and Training of Public Accountants," *The Journal of Accountancy*, Vol. 104, No. 4, p. 71.

[4] John E. Mulder, *Services Offered by The Joint Committee on Continuing Legal Education* (Philadelphia: Joint Committee on Continuing Legal Education of the American Law Institute and the American Bar Association, 1958), p. 1.

first draft of the course materials. Other courses will be produced almost exclusively by the technical assistants in the Institute's offices in New York.

Regardless of who produces the original draft, the proposed course materials will be edited by three to five experts. These reviewers will be drawn primarily from the 74 members comprising the Institute's Advisory Committee on Professional Development. Eight members of the 74-man committee are university professors of accounting. Other functions of this committee include: (1) to counsel the Director of Professional Development in selecting subject matter for courses and in determining effective means of presenting them; (2) to assist the Director in selecting persons to prepare course materials; (3) to act as the Institute's official representatives at course offerings; and (4) to play leading roles in promoting the Institute's courses.

After a set of course materials has been approved by the special committee of reviewers, the course will be given its trial-run under the sole auspices of the Institute. The suggestions for improving the course made by the enrollees at this trial run are incorporated into the revised course materials. Only if the Institute is reasonably assured that the course is worthwhile and will be received favorably is it offered to the network of state societies of CPAs on a cosponsorship basis.

Each state society appoints a coordinator whose primary function is to work directly with the Institute in presenting the Institute's courses in his state. If a state society is organized on a chapter basis, each chapter appoints a coordinator.

The coordinators, or perhaps more properly, the state society organizations, assist in the promotion of the course and assume the responsibility for attracting a sufficient number of enrollees to warrant its presentation. In addition, the state society generally attends to the administrative details involved. At times, these details may be attended to by a cooperating university.

The educators and educational institutions must play vital roles in this program if it is to succeed.

Dean Paul Garner, in addressing the 1958 Annual Meeting of the American Institute, stated, "In order to obtain the most favorable environment for a really effective CPA continuing education program, there should be a very close liaison between accounting educators and practitioners." He warned that "the lack of a deep and strong rapport between the universities and the CPA profession . . . will be a partially limiting factor until it is corrected."[5]

I hope that this necessarily brief description of how the courses are produced and administered will suffice. As for the subject matter or the kinds of courses that will be offered, the Institute stands ready to produce any course for which there is a need and demand. It was primarily for this reason that the division was named the Division of Professional Development rather than the Division of Continuing Education; the latter title was considered not a big enough umbrella to spread over the variety of courses we hope to produce and offer to both practicing and nonpracticing certified public accountants.

Among the courses planned, for example, is an entire series dealing with the economics of an accounting practice. The one-day seminar on accountants' fees and the course on tax practice administration are the first in this series.

Another series of courses will deal with management advisory services. The initial course in this series, entitled "Budgeting for Profit in Small Business," was first

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[5] Paul Garner, "The Challenges of a Continuing Educational Program for Public Accountants," The Accounting Review, Vol. XXXIV. No. 2, pp. 229–230.

offered last June and is currently being revised to incorporate improvements suggested by the participants. This course, incidentally, was designed and taught by university professors. The architect was Professor Robert N. Anthony; the bulk of the teaching was done by his colleagues, Professors Russell H. Hassler and Neil E. Harlan.

Subject matter of future courses in the management services series may likely encompass inventory management, production control, budgetary controls, financial management, direct costing, pension planning, welfare funds, return on investment concept, or any other subject for which there is a need and demand.

In other areas, the following courses are in process: a course on estate planning, a course in effecting tax savings for clients, and a staff training program for junior accountants.

Some persons question the need for a staff training program. These critics state that the auditing courses as taught in most universities prepare the accounting graduate to carry out effectively his first year's assignments in public accounting and that the Institute's training program intends to replace or duplicate the materials properly belonging in a college curriculum. Nothing could be farther from the truth. Although it is possible that this program may, when complete, relieve the universities of some of the vocational training that they have to incorporate in their curricula, it is intended that the Institute's courses supplement and complement the university's role. The American Institute's *Annual Report* for 1958 contains this reasoning:

"The educational needs of the accounting profession have been growing until they demand solutions now. At the same time, the colleges and universities are facing such severe pressures on their resources that they can scarcely be expected to expand their programs materially. Without a good deal more help than they are getting, they are finding it impossible to meet the special needs of all professions, including accounting.

"There is a more fundamental reason why it is unrealistic to expect the universities to solve the problem for us. Along with all of the professions, accounting is asking them to provide us with well educated generalists who have some knowledge of their purpose in life, a maturity in their relationship to society, and a capacity to live and work effectively with clients and associates. To accomplish this in four years of undergraduate study and still lay the minimum groundwork for a career in accounting is challenge enough to the educators."[6]

On the specific point of staff training programs the *Annual Report* states:

"Many practicing certified public accountants have had inadequate training in some phases of practice. It is difficult for many of them to provide an adequate training program for their beginning juniors. High starting salaries make it desirable that juniors become productive as soon as possible. A sound training program is an important inducement in recruiting good men. For all these reasons, staff training is of particular importance to local accounting firms.

"At the present time local firms are at a great disadvantage in this regard. It is natural and proper that they should look to the Institute and their state societies to help them achieve on a cooperative basis the kind of staff training and continuing education courses which national firms have shown to be economically sound."[7]

The training director of one of these national firms explains why his firm needs a centralized staff training school with these words:

"The traditional method of on-the-job training, summer training programs, etc., were not fully meeting the immediate needs of new staffmen or our desire that every man, even the beginner, be able to contribute to the service being rendered to the client through a better knowledge of and experience in our procedures as well as a fine academic background . . . the keystone of training is the centralized training school for new, inexperienced assistants."[8]

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[6] *Annual Report 1958* (New York: American Institute of Certified Public Accountants, 1959), pp. 4–5.

[7] *Ibid.*, p. 4.

[8] Carl J. Bohne, Jr., "The Home Office Staff Training School," *Arthur Andersen Chronicle*, July 1955, p. 176.

The Institute's staff training programs will be designed for those firms who have not developed or do not have the resources to develop formal training programs of their own. The Institute's training program for junior accountants will emphasize the assignments of a public accounting neophyte. It will differ from the general college course in auditing, which usually assumes that the detail work of the junior accountant has already been performed. The college course logically is designed to cover the overall aspects of auditing, and again quite logically gives only limited training in the work of the junior accountant. This general theory course provides the cornerstone upon which the training programs of the profession can be built. The plan of the Institute is to produce a series of courses to make it easier for each CPA to pursue his own program of professional development.

The task before us is frightening in its enormity and complexity. The task is ours—the responsibility of everyone in the profession, individually and collectively. The late Marquis G. Eaton once wrote:

> "Events, which are not entirely of our own making, have presented us with a unique opportunity and a great responsibility. The importance and the urgency of the need for a comprehensive program of continuing professional education is so great, and the area so large, as to require the best thinking and efforts of all groups, organizations, and individual members of the profession.
>
> "For instance, teachers of accounting, deans and college administrators can, and I think should, study the ways in which schools can best contribute to the post-graduate education of their graduates and others."[9]

The American Accounting Association has already given tangible evidence of its willingness to assume its proper share of the responsibility and to cooperate fully with the Institute in this new venture. Early this year, President Martin L. Black appointed a new committee, an Advisory Committee on Professional Development, to study and recommend ways in which the Association could best discharge its responsibilities. The Institute welcomes this pledge of cooperation and assistance. We fully recognize the important roles the educational institutions and accounting educators play in a continuing education program. In many cases, the university may be asked to recommend and appoint a person or division to work with the Institute and the co-sponsoring state society of CPAs in making arrangements for the offering of the Institute's continuing education courses.

As the number of courses increases, the need for instructors will become correspondingly greater. The qualifications of the instructor for a particular continuing education course will naturally vary with the subject matter of the course. In most cases, the instructor will need to be experienced both in teaching and in the practice of accounting.

Everyone in the profession has a responsibility to continue his own personal professional development program. Accounting educators are not relieved of this responsibility. The need for a greatly expanded core of instructors for the Institute's continuing education courses suggests that the accounting educators can render invaluable service to the profession by including in their personal development programs the acquisition of experience in public accounting practice and knowledge of the problems of the practitioner. Experience in or, at minimum, intimate knowledge of modern-day public accounting practice is a requisite for instructing a continuing education course for certified public accountants. Furthermore, many educators believe that public ac-

[9] Marquis G. Eaton, "The Lifelong Education of the CPA," *The Ohio Certified Public Accountant*, Vol. XVI, No. 3, p. 120.

counting experience is required to fulfill properly one's role as a college accounting instructor.

This proposed course of action warrants the serious consideration of every person in accounting education. The rewards would be many. In addition to deriving the intangible satisfactions and pleasures that accompany accomplishment, financial rewards are both possible and probable.

In conclusion, I would like to emphasize that the task before us is endless. However, with proper coordination and co-operation of all segments of the profession, progress, deliberately slow but certain, will be made.

REPORT OF THE COMMITTEE ON THE SCOPE OF THE FOUR YEAR ACCOUNTING MAJOR

Trends in Undergraduate Accounting Education

IN ORDER to determine the curriculum changes during the past five years, a questionnaire survey was undertaken. Questionnaires were mailed to approximately 90 accounting department chairmen and 78 returns (approximately 87%) were received. The questionnaire was divided into four sections:

1. Statistical data relative to degrees conferred for the years 1955–1959.
2. The percentage allocation of total baccalaureate hours to accounting, other business, and non-business courses taken by 1959 graduates.
3. Specific undergraduate curriculum changes made during the last five years including *required* courses added or dropped.
4. Specific undergraduate curriculum changes expected during the next five to ten years including reallocation of total hours and identity of possible new courses.

As indicated in Table I there has been a significant increase in the number of baccalaureate degrees conferred by colleges of business administration. In 1959 the degrees conferred to graduates with an accounting major or equivalent represented 23.7% of the total baccalaureate degrees as compared to 23.9% in 1955. However, while total baccalaureate degrees have shown a continuous increase during the five year period, the number of degrees issued to accounting majors has declined during the past two years from a peak of 25.3% in 1957. This decline suggests the need for continued efforts to attract more qualified students to accounting, and it is the hope of the Committee that the excellent initial work of the Committee on Accounting Careers will be continued and expanded.

The statistics relative to master's degrees were obtained in an effort to determine whether there is any significant trend. Except for 1956, there has been a continuous increase in master's degrees with an accounting major or equivalent. Using 1955 as the base year, 1959 master's degree graduates represent a 22.5% increase. However, there has been no appreciable change in the proportion of master's degrees in accounting to baccalaureate degrees in accounting over the five year period.

In 1954, The Standards Rating Com-

TABLE I

DEGREES CONFERRED 1955–1959

	1955	*1956*	*1957*	*1958*	*1959**	*Total*
Total Baccalaureate Degrees in Business	17,021	18,782	20,493	20,592	20,596	94,484
Total Baccalaureate Degrees with Accounting Major or Equivalent	4,071	4,559	5,072	4,982	4,887	23,571
Total Master's Degrees with Accounting Major or Equivalent	559	541	566	629	685	2,980
Percentage of Baccalaureate Accounting Degrees to Total Baccalaureate Degrees in Business	23.9%	24.3%	25.3%	24.2%	23.7%	24.2%
Percentage of Master's Degrees to Baccalaureate Degrees in Accounting	13.7%	11.9%	11.1%	12.7%	14.0%	12.6%

* Estimated.

TABLE II

PERCENTAGE DISTRIBUTION OF TOTAL HOURS TAKEN BY 1959 ACCOUNTING GRADUATES

Hours Required for Graduation	*Accounting*		*Basic Areas of Study Related Business*		*Non-Business*	
	No. of Schools	*% of Total Schools*	*No. of Schools*	*% of Total Schools*	*No. of Schools*	*% of Total Schools*
15	3	4%	3	4%		
20	19	24%	16	20%		
25	44	56%	35	45%		
30	10	13%	13	17%		
35	2	3%	10	13%	1	1%
40			1	1%	8	10%
45					15	19%
50					22	28%
55					31	40%
60					1	1%
	78	100%	78	100%	78	100%

mittee recommended that the total undergraduate hours be allocated 25% to accounting, 25% to business, and 50% to non-business.[1] The survey of collegiate schools of business made by the Task Committee on Standards of Accounting Instruction in 1955 revealed that the most common overall pattern reflected this allocation precisely. However, their findings also indicated "a tendency for accounting to be slightly less than 25%, non-business to be slightly less than 50%, and for other business courses to be more than 25%."[2] Table II shows that in the curricula completed by 1959 accounting graduates, accounting constitutes 25% of the total undergraduate hours in 44 schools (56%), related business courses represent 25% of the total hours in 35 schools (45%) and non-business equal 50% of the total hours in 22 schools (28%). On the basis of a weighted average, the replies indicate that the total undergraduate hours were allocated 24% to accounting, 26% to business courses other than accounting, and 50% to non-business courses.

In summary the results of the questionnaire survey seem to support the following conclusions:

1. The proportion of accounting degrees to total baccalaureate degrees in business has remained relatively constant during the past five years.
2. There has been an increase in the number of MBA degrees with an accounting major or equivalent.
3. The allocation of undergraduate hours to accounting, other business, and liberal arts has remained at approximately 25, 25, and 50% respectively, in the majority of schools.
4. There has been a slight reduction in required accounting and a slight increase in the number of required courses in business and liberal arts.
5. The principal changes expected in the next five to ten years involve a shift in emphasis to managerial accounting and electronic data processing and a decline in accounting techniques within the existing allocation of total hours.
6. A trend toward a five year program with consequent deemphasis on the four year accounting major is envisaged.

Committee Recommendations

The recommendations of the Committee are a product of intensive research into available literature pertaining to accounting curricula such as the Commission Report on Education and Experience for Certified Public Accountants, the Bailey Committee Report, the report of the

[1] THE ACCOUNTING REVIEW, January 1954, p. 43.
[2] THE ACCOUNTING REVIEW, January 1956, p. 37.

Standards Rating Committee of the American Accounting Assocation, a study of the questionnaire results, and extensive committee discussion.

The Committee reaffirms the basic objectives of accounting education as established by the Standards Rating Committee in 1954; namely, Educating the Citizen, Education in Business, and Education in Accounting.[3] However, in the light of recent developments in accounting education, the Committee believes it is appropriate to state the business and accounting objectives more specifically. It is the opinion of this Committee that undergraduate accounting training should permit the accounting major to (1) develop an inquiring mind, (2) obtain a thorough understanding of accounting concepts and principles, (3) acquire an appreciation of the role of accounting in business, (4) become familiar with the environment in which business operates, and (5) have a knowledge of the functional areas of business. We do not believe the objective should be a fully trained accountant but rather an individual who is prepared to enter employment as a public, private, or governmental accountant.

The Committee believes that the recommendations of the Standards Rating Committee relative to the allocation of total undergraduate hours to accounting (25%), business (25%), and liberal arts (50%) provide an acceptable though not necessarily an ideal plan for fulfilling the objectives of accounting education.

For the present, the Committee does not feel that an increase in the proportion of total hours allocated to liberal arts is necessary. Rather, it is our opinion that adequate liberal and cultural training can be provided within the existing framework by improving the quality of liberal arts courses.

Conclusion

Accounting education is in a state of transition. As seen by this Committee, the changes will result in orderly and logical evolution within the traditional framework. We believe this evolution will consist of a broadening of the scope and content of the four year undergraduate major by (1) a reduction in total undergraduate hours in accounting, (2) an increase in the number of hours in business, and (3) an increase in the quality of liberal arts courses. In our opinion these changes will lead to more and better graduates of undergraduate accounting curricula and further the development of collegiate education in accounting. While we believe there will be a trend toward five year accounting programs we do not anticipate that such programs will eliminate the need for a four year undergraduate accounting major.

R. J. Canning
Samuel R. Hepworth
Edward L. McGowan
Gordon Shillinglaw
Frank P. Smith
David W. Thompson
Walter G. Kell, *Chairman*

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[3] The Accounting Review, January 1954, p. 39.

RECENT DEVELOPMENTS IN ACCOUNTING THEORY*

Maurice Moonitz
Professor, University of California, Berkeley

AND

Carl L. Nelson
Professor, University of Minnesota

This discussion of the major developments of the last fifteen years or so is concerned with the principles or standards of accounting. It does not touch on matters of auditing procedure, such as the use of statistical sampling methods, or on matters of professional practice. Nor does it comment on the challenging developments in the area of professional standards and education.

When we stand back to take a long look at the scene in order to gain more perspective than is possible on a day-to-day basis, several broad developments related to fundamental forces can be detected. Two of these may be termed "economic" in origin, since they stem either from problems of the professional economist, or from the body of economic theory. We refer to the rapid developments in national accounting theory and systems and to the rise of interest in managerial accounting. The increased attention given to direct costing and other tools of managerial accounting can be expected to grow as American industry becomes more highly rationalized.

Another development, the new merger movement, stems from similar structural changes now occurring in the American economy. Still another, the changing form of the wage contract, is clearly related to the social upheaval that has been occurring in this country at least since the early 30's. Additional developments are the marked increase in the price level, and the height to which income tax rates have risen. A further development, still in its early stages, is the attempt to reformulate accounting theory by the use of modern mathematical and logical means.

National accounts. At the present time we find four types of "national accounts." Probably the best known are the national income and product accounts, pioneered in this country by Simon Kuznets of the National Bureau of Economic Research and prepared and published regularly by the U. S. Department of Commerce. The Department of Commerce figures are the ones on which comments about gross national product or national income are based. Ideally, what the national income accounts try to do is to prepare a consolidated statement of operations for all economic units in a given country.

Second among the types of national accounts is the calculation and report of money-flows, or fund flows, in the economy as a whole. This type of national accounting was developed primarily by Morris Copeland of Cornell University and taken over by the Federal Reserve Board. As the name implies, these accounts attempt to measure the purely financial movements in the economy. Their counterpart at the level of the firm is the statement of sources and uses of funds.

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* This is the first of a series of papers based upon the work of the Committee on Accounting Theory during the two years ended December 31, 1959. It represents the views of the authors and is in no sense a committee report.

A third type is the input-output, or the inter-industry analysis developed by Wassily Leontief at Harvard and advanced with the support of the Department of Defense. In essence this analysis conceives of the economy as a giant grid with each productive unit occupying one cell. Each productive unit must obtain its materials and its supplies and services from some other unit, and must deliver its output somewhere; this type of analysis attempts to plot and calculate all the interrelationships. The technical basis of the interest in this analysis by the Department of Defense lies in the impact which its procurement program has on the economy. In peacetime or in time of war, the Defense officials must know what the economy can produce and at what rate, where the bottlenecks are likely to be, and where the delays in performance are likely to be minimal.

These types of accounts are all reports on flows, roughly analogous to an income statement or a statement of source and application of funds in private accounting. The absence of a national balance sheet has long been noted, but only recently has a good start been made to remedy the defect. In 1955, Raymond Goldsmith published a three-volume work entitled "Study of Savings in the United States," which starts us on our way to the fourth type of national accounting, namely, a national balance sheet.

Except to satisfy our curiosity, of what significance are these developments by the economists and statisticians? In the first place, the debit and credit mechanism of private accounting has been adopted deliberately in these areas as the vehicle to carry the results of the calculations. In the second place, these economists have patterned their procedures rather closely upon the practices developed by accountants. In the third place, these economic studies will continue to generate powerful forces to make us define our terms more precisely and to unify our procedures so that the financial reports of private businesses may be used more readily as grist for their mill. And finally, in the long view, we may get a more generalized theory of accounting than we now have, a theory which will unify the whole field whether at the private enterprise level or the national level.

Direct costing

Direct costing is a part of the area of "managerial accounting," discussed at some length below, which has had a marked impact on the traditional concepts of cost measurement and income determination. In April, 1953, the National Association of Cost Accountants published a study of "Direct Costing" as No. 23 in its Research Series. According to this research report, the earliest reference to direct costing appeared in the *N.A.C.A. Bulletin* of January 15, 1936 in an article by Jonathan Harris. But little attention was paid to this proposal until after the end of the war. The erratic behavior of overhead or indirect or fixed costs was clear to all in the years of low activity in the 1930's and of extremely high activity in the 1940's. The analysis of the relationships among cost, selling price, and volume of output is one of the really strong areas of the economic theory of the firm and of the industry. It is not surprising to see, therefore, a strong attempt to transfer this kind of economic analysis to the accounting problem of the proper treatment of period and product costs. How far the movement to direct costing will go is not clear. To date, emphasis has been placed on its use in interim reports to management, the belief being that such reports present a more meaningful review of the past. The dominant view is that inventory valuations based on direct costing are not suited for inclusion in the year-end bal-

ance sheets. The primary result of the direct costing movement may be its emphasis on the distinction between variable and fixed costs and its recognition that costs are not simple functions of either production or of revenues. This aspect of direct costing is discussed in the next section.

Managerial accounting

Traditionally the term "accounting theory" has been restricted to that portion of accounting literature dealing with the content of financial statements. Excluded from "theory" is the pragmatic, how-to-do-it literature dealing with the methods of compiling the data appearing in the statements. Throughout all this literature runs a recognition that the accountant serves management by providing data in addition to that which appears in the statements and by analyzing data, but again, generalizations are not made and a theoretical structure is not available.

More recently, accountants have turned a larger portion of their attention to this type of analysis, which we will call "managerial accounting." In one sense, all accounting is managerial accounting because it provides information which, hopefully, will be of value to management. We here define the term as that part of accounting, apart from the financial statements, which provides information to management, information to be used as a basis for making decisions on internal operations.

From one point of view, there is no accounting literature in the field of the theory of management accounting. For the most part the accountant is still groping in his attempt to state the problem. He has consequently relied on literature outside his field. In a recognition that all knowledge is interrelated, he is borrowing from the fields of economic theory, of industrial engineering, and of psychology. Accounting thus tends to lose its identity, to become a part of "management science." A general review of the theoretical framework of managerial accounting can be found in "Tentative Statements of Cost Concepts Underlying Reports for Management Purposes" and "Report of Committee on Management Accounting," both products of committees of the American Accounting Association.

Management must determine what products to produce, what combination of factors of production to use, what volume to produce, and what prices to place on the output. The economist, concerned with the allocation of scarce resources, has built a supposedly rational structure explaining the activities of the firms which allocate these economic resources. The accountant has turned to this literature to determine what may be its relevancy to his task of serving management.

Cost data furnished to management must be relevant to the problem. J. M. Clark's ***Economics of Overhead Costs*** has influenced us to the extent that his ideas are now found in some of the elementary accounting textbooks. Interest in the relationship of costs to output, important in making any output decision, has been stimulated by the National Bureau of Economic Research's publication, ***Cost Behavior and Price Policy***, and Joel Dean's empirical cost studies. The cost accounting books of today now reflect these pioneer works. Entirely within the framework of accounting, direct costing focusses attention on the direct or variable cost and eliminates the need for the allocation and application of indirect or fixed cost.

Little has been done by accountants to rationalize the decision-making process in the solving of the twin combination problems, (1) what combination of factors of production will minimize costs and (2) what combination of products will maximize income. Recent work in economics is apparently relevant to this issue. Account-

ants are now reading books such as *Welfare and Competition* by Tibor Scitovsky, as evidenced in part by two articles of Robert Jaedicke's in recent issues of THE ACCOUNTING REVIEW, both based on the use of recent developments in the economist's theory of the firm.

Developments such as these are easily absorbed by the accountant. They involve only two variables; as a result they can be approached by graphics or by simple algebra. Business decisions are not as simple as this, however, for they involve many variables. Many decisions (e.g., product combination, factor combination, output, pricing) must be made simultaneously. Growing out of World War II, the mathematical technique of linear programming, and the entire field of operations research, has provided important tools for business in the solution of these problems. To some accountants, this is something to ignore; to others it involves the determination of the appropriate cost data to fit into models developed by others; to still others this offers a genuine opportunity to increase the service offered to management.

In general, all the preceding approaches are based upon the assumption that management attempts to maximize profits, and that profit maximization can be achieved by the use of the marginal analysis of economics. In practice, however, full-cost pricing appears, outwardly at least, to be common in American industry. The accountant is therefore forced to face the problem of how to reconcile the two apparently conflicting ideas, or to discard or to modify one of them. Full-cost pricing requires, of course, a solution to the problem of determining the volume of output to be used in the full-cost calculation. The accountant must understand what the firm is and what its goals are before he can fully discharge his obligations in this area.

These problems are short-run problems to the extent that cost and revenue appear in the same period. If costs are incurred to secure revenue in future periods, management and the accountant are confronted with "investment decisions." Applied especially to equipment, but applicable to all plant acquisition, the accountant has leaned on the work of economists (e.g., George Terborgh and Joel Dean) and of engineers (e.g., Eugene Grant). For inventory planning, T. M. Whitin's book has provided a generalized framework as a substitute for the more simple least-cost-purchase-order approach. For both types of problems, the accountant must recognize the existence of uncertainty. As a result, working in this area requires an understanding of probability theory and, for some problems, the use of statistical methods.

In addition to providing information to aid in making plans, the accountant must provide assistance in their implementation. Two general principles have been widely applied in recent years: (1) the accounting system must start with the organization chart, and (2) costs should be compared with a standard of some sort. From the first has developed the idea of "responsibility accounting" and the consequent elimination of cost allocation. From the second, and the earlier in point of time, comes the idea of a standard unit cost for labor and material, and of a flexible budget for overhead. Here is an interrelationship between planning and control; for both, studies need to be made of the functional relationship between output and cost.

Most of the work in accounting control is based on common-sense ideas about the process by which human beings are motivated. In part, it assumes that business is partly a game and that supervisors will desire to "run up a high score." In addition, the "carrot-stick" combination is

assumed to be effective in increasing the effort to secure rewards and to avoid penalties. Until recently, accountants have felt that the fields of organization theory and psychology had little to offer. Recent developments in these fields are encouraging, however, so that we may soon be more secure in our knowledge of motivation.

In the area of accounting systems, the development of the electronic computer has forced a complete reassessment of the problem. In the past, changes in "hardware" permitted a retention of the same flow of information. What occurred as a result was the substitution of machine writing for human penmanship. With the computer, this substitution is either impossible or its use uneconomic. The necessary reconstruction of accounting systems has forced a reconsideration of the information that should be accumulated and processed, as well as the place that accounting has in the business organization. As a matter of fact, the field of accounting systems may be displaced by information theory. Here again, accountants have found the work done in other fields useful and stimulating. Norbert Wiener's *Cybernetics* comes to mind in this connection. Within the field of accounting itself, William Vatter's article in *Management Science* for October, 1958 should stimulate further interest.

Merger and expansion

The expansion and realignment of business units that have been taking place at such a rapid rate since the end of the war have had some direct impact on received doctrine in accounting. In 1950, Accounting Research Bulletin No. 40 was issued by the Committee on Accounting Procedure of the American Institute of Certified Public Accountants in which a distinction was drawn between a merger which took the form of a purchase and one which took the form of a "pooling of interests." In technical terms, the difference in form leads to a difference in the treatment of the retained earnings of the company which goes out of existence. In a purchase, none of the retained earnings appears on the records of the surviving company; in a pooling of interests, however, there is a transfer of surplus. This position was reaffirmed in ARB 43. In January of 1957, ARB 48 on business combinations was issued, reaffirming and clarifying the distinction between a purchase and a pooling of interests, and also extending the principle to the preparation of consolidated financial statements. Under this latest bulletin, earned surplus of a subsidiary as of date of acquisition is not to be eliminated in consolidation but instead is to be carried into the consolidated figures.

In the broader view, this change in the attitude of some toward a merger or a consolidation is part of the problem of determining what it is we are accounting for. Apparently, the legal boundaries of corporateness are no longer adequate. Some years ago the Federal Power Commission put into effect its doctrine of "original cost" (referred to by its opponents as "aboriginal cost") in which gains or losses on transfers of property from one public utility to another were ignored in recording the cost of utility plant in service. Aside from the merits or demerits of this doctrine, it reflects a change in attitude toward the objectives of accounting. Instead of concern with a privately-owned, legally-defined business corporation, the regulatory commission is interested in accounting for a collection of resources "dedicated to the public service." The investor moves away from the center of attention; in his place stand the consumers, and their rights and their obligations. The "new look" with respect to mergers and pooling of interests is not identical with the "original cost" situation,

of course, but it is clearly related to it in the manner just outlined.

Changing form of the wage contract

One effect of another substantive structural change, the new form of the wage contract, is illustrated in Chapter 13 of ARB No. 43 which discusses pension plans and annuities, as well as compensation involved in stock option and stock purchase plans. In October, 1956, ARB No. 47 on the costs of pension plans was issued to clarify further the earlier discussion of the problem. We are also aware of the extent to which collective bargaining is now emphasizing "fringe benefits" and, in some quarters, a move toward some form of "guaranteed annual wage." What this means in the social sphere is beyond the scope of our discussion, but its impact on accounting is becoming painfully clear.

Up to recent times, the real problems in accounting for employee compensation lay in the systems area, in the task of rapid processing of complicated formulas for determining "take-home" pay, but the nature of the resultant figures has been clear enough. Even at the present time, however, to say nothing of what the future may bring, it is not so easy to describe, let alone calculate the liability of the employer toward his employees in the presence of pensions, health and welfare funds, and other fringe benefits. And if we can't be sure of the liability, we can't be sure of the financial position or of the results of operations.

The rise in the price level: inventory valuation

In 1941, the Consumers' Price Index of the U. S. Bureau of Labor Statistics stood at 63; in 1951, it had moved to 111. By May, 1959, it reached 124, and has shown no tendency to decline. For all practical purposes, then, the price level has doubled in the last 20 years; the size of the measuring-rod we use, the dollar, has been cut in half. During the same period of time, income tax rates have moved steadily upward, reaching a peak during the latter part of the war, then declining somewhat, but presently still at extremely high levels. These two forces (rising prices and rising tax rates), singly or in combination, have had far-reaching impacts on accounting. We touch on some of them.

Let us review first the effect of the rise in the price level on the calculation of business income. How have we adapted to the dilemma created by a shrinking yardstick? One of the most prominent developments is the change in the function assigned to Lifo as a method of inventory pricing. Originally Lifo was advocated and adopted as a device to offset somewhat the effects of the business cycle, the fairly regular rhythmic expansion and contraction of prices. Under this conception, so-called "inventory profits" would be eliminated from the accounting records and reports in the upswing, and "inventory losses" eliminated in the downswing. But during the 1940's, a perceptible change occurred, so that now Lifo is presumably one of the buttresses against inflation, that is, against a rise in prices to a new, higher plateau, with no expectation of a compensating decline in the foreseeable future. The "breakthrough," so to speak, occurred in 1947 in *Hutzler Bros. Co. v. Commissioner* (8 TC 14), when the Tax Court ruled that the "elective" method (Lifo) was applicable to a department store and, furthermore, that the option to use Lifo could not be denied a taxpayer because of the nature of his inventory. This decision was expanded and reinforced in 1948 in the *Edgar A. Basse* case. But the enduring significance of these two cases did not lie in the redefinition of the scope of an inventory method, but rather in the recognition of the usefulness and practicability of index numbers. In the *Hutzler Bros.* case, an

index prepared by someone other than the taxpayer was used; in the *Basse* case, however, the taxpayer constructed his own index based upon his own experience, and was upheld in its use by the Tax Court. And so the groundwork has been laid. Never again can anyone argue against the use of price indexes to adjust accounting data on the grounds that they are impractical or unrealistic or beyond the comprehension of the average taxpayer. We have been using them at least since 1947 for tax purposes in connection with the "dollar-value" variant of Lifo.

But Lifo, with or without price indexes, is far from satisfactory. As long as prices remain high, the short-run tax advantages of the method will remain. But if prices should soften, as they have in certain instances in recent years, the advantages may evaporate quickly. This result follows from the interpretation of Lifo as a "cost" method, not as a method which may be used with "cost or market, whichever is lower." As a consequence, those who find Lifo advantageous while prices are rising are not willing to live with it when prices fall. For example, to avoid the tax disadvantages of Lifo on the downswing, persistent attempts to change the Internal Revenue Code to permit the combination of Lifo and cost-or-market have been made. Thus far they have been unsuccessful.

As a last comment on Lifo, we refer to the reporting problem created by its use during and after an inflationary period. The gross understatement of inventories on the balance sheet has caused much soul-searching and squirming. No generally acceptable solution has been forthcoming in the face of the rigorous requirements of the Internal Revenue Code and the related Treasury Regulations. A few companies do disclose the approximate current replacement cost of their Lifo inventories, but most of them do not.

The rise in the price level: depreciation

In addition to Lifo, which is directed at the cost of goods sold figure, the postwar period has seen attempts to change depreciation practices to adjust in part to a rising price level. A move toward "excess" depreciation, that is, a charge in excess of cost or other acceptable basis, was nipped rather early by a research bulletin now reproduced as Chapter 9 (A) of ARB No. 43. But it is significant that six members of the Committee on Accounting Procedure dissented to this part of ARB 43. The dissenters argued, in effect, that "a supplementary charge" to income should be permitted.

With "excess depreciation" outside the pale, at least for the time being, accelerated depreciation was revived. At least as far back as 1927, Henry Rand Hatfield in his *Accounting: Its Principles and Problems*, described the constant-percentage-of-diminishing-value and sum-of-years'-digits methods of depreciation and commented that ". . . a declining depreciation is thought to correspond better with the economic facts" (p. 152). No one need feel apologetic or constrained to explain a "novel" method of depreciation when he talks about accelerated depreciation. Apparently accountants have used the straight-line method so long that they confuse it with one of the laws of the Medes and the Persians. As a matter of fact, straight-line depreciation is probably one of the most difficult methods to defend on strictly rational or theoretical grounds.

But we still have not solved the problem. As was true with Lifo, accelerated depreciation was not designed to deal with inflation or deflation, and cannot be made to do so by some arcane ritual. As soon as all our depreciating assets are on the new basis, the annual depreciation charge will be the same as it would have been if we had not made the change, and the problem is still with us.

In 1958, a bill was introduced in Congress by Rep. E. J. Keogh to permit "reinvestment depreciation" for income tax purposes. In brief, the bill would permit an additional deduction at the time of the retirement of a fixed asset for the difference between (a) the current value of the asset at that date and (b) its initial cost, provided the asset is in fact replaced. The bill did not pass in 1958, but was reintroduced in 1959. As H. T. McAnly points out in the October, 1958, issue of *The Controller*, the task of getting Congress to recognize the impact of inflation is made most difficult by the failure of accountants to insist on its recognition in the financial statements they prepare or review. If accountants and businessmen are so indifferent to the impact of inflation that they ignore it in their financial statements, why should Congress and the Treasury be ready to recognize it in the income tax return? And if the type of tax "relief" we do get is unpalatable to us as theorists, to what extent does the fault lie in our failure to develop a clear, cogent theory of the relationship among changes in individual prices, in the general price-level, and the conventional standards underlying the preparation of financial statements?

The rise in the price level: general approach

At a more comprehensive level than that attained by Lifo, and by accelerated depreciation, we have at least two major efforts to develop a theory to sustain "adjusted costs," that is, costs adjusted for the effects of price-level changes. One is the report of the Study Group on Business Income, *Changing Concepts of Business Income*, published in 1952. The attitude of this report may be gleaned from the following sentence (p. 139): "The committee's views (are) that the two components of business income as now conceived [(a) the results of activities measured in units of equal purchasing power and (b) the results of changes in the value of the monetary unit] should be recognized as separable and possessing different significances, and that efforts should be made to isolate them, first in supplementary materials, and ultimately, perhaps, in the primary accounts of business corporations." The other is the report entitled "Price Level Changes and Financial Statements," published in the Accounting Review, October, 1951, by the Committee on Concepts and Standards of the American Accounting Association. This report urged experimentation with supplementary financial statements which were completely adjusted in terms of some index of the general price-level and in which the income statement and the balance sheet were consistently treated. Following this report, the American Accounting Association sponsored a research project described in three monographs:

1. "*Basic Concepts and Methods*," by Perry Mason, published in 1956.
2. "*Case Studies of Four Companies*," by Ralph C. Jones, 1955.
3. "*Effects of Price Level Changes on Business Income, Capital, and Taxes*," by Ralph C. Jones, 1956.

This research project, incidentally, is an encouraging example of cooperation toward a common goal—Ralph Jones is on the faculty at Yale, and Perry Mason was on the faculty at Berkeley when the project was undertaken; the Merrill Foundation supplied the bulk of the funds for the out-of-pocket costs, and four firms of accountants analyzed and converted the financial accounts and prepared the major exhibits for the four case studies (Arthur Andersen & Co.; Lybrand, Ross Bros. & Montgomery; Peat, Marwick, Mitchell & Co.; and Seward and Monde).

Sale and lease-back

Let us turn now for a look at the effects of the rise in the price level and the high

level of tax rates. The most obvious practical effect has been the search for methods to reduce or postpone income taxes. We have already touched on Lifo and on accelerated depreciation. In addition to these two, the sale and lease-back of fixed assets has risen to prominence in the postwar period. Coordinate with the increasing prominence of the lease-back is the resultant change in the scope of our financial statements and their comparability. In almost every case the sale and lease-back have been interpreted in terms of legal form rather than of business or economic substance. As a result, substantial portions of fixed assets have dropped from sight, along with the related debt to which the companies are committed. A strong warning was sounded by the Securities and Exchange Commission in its 15th Annual Report for the year ended June 30, 1949. About a year before that report, Arthur Cannon published a warning in the *Journal of Accountancy* (April, 1948) under the title "Danger Signals to Accountants in 'net-lease' Financing." A cautious but nevertheless politive stand was taken by the Committee on Accounting Procedure in Accounting Research Bulletin No. 43, Ch. 14. The consensus is clear—the improvement in working-capital resulting from the sale of fixed assets and from reduced tax liabilities is accomplished at the cost of creating a fixed obligation of substantial amount. The fixed obligation should be disclosed, in the body of the financial statements, as a real debt, not as a contingent item, and certainly not buried in a footnote.

Funds statements

Changing price levels and new methods of financing have combined to enlarge the scope of financial reports, especially in the increased use of the source-and-application-of-funds statement. *Accounting Trends and Techniques*, published annually by the American Institute of Certified Public Accountants, reports increasing use of this statement. Hector Anton in the October, 1954 issue of THE ACCOUNTING REVIEW reported the results of a survey he had made of "Funds statement practices in the U. S. and Canada." He found that almost every company used a funds statement for internal managerial uses, even though it did not include one in its published reports. The theoretical issues involved have also received close attention in many quarters. The funds statement is usually discussed as a report on the changes which have occurred in working capital or its major components. Louis Goldberg of the University of Melbourne (Australia) has, however, presented a broader conception of the funds statement as a report on all "external transactions." One of the most ambitious projects along these lines is contained in a monograph by William J. Vatter, "The Fund Theory of Accounting and its Implications for Financial Reports," published by the University of Chicago Press in 1947 and reprinted in 1951.

All this ferment in the area of funds statements signifies the recognition that all the important financial events of a given year are not reported in the conventional trio of balance sheet, income statement, and surplus analysis. Something more is needed to tell the story of the manner in which a company was financed. And we must confess that with the wobbly figures we find in most income statements these days, something else is needed. A funds statement is not nearly as sophisticated a device as an income statement, but it is a bit more objective, and relatively immune from the influence of tax-reducing devices.

High taxes and the reporting problem

Some of the previous topics discussed dealt with cases, such as Lifo and ac-

celerated depreciation, in which accounting practice and theory were modified in response to tax pressures, whether justifiable on other grounds or not. But in addition to this important group is a problem which stems from the fact that in many instances tax accounting and business accounting are different. As a result, for the first time in our history, we are seriously confronted with the problem of the way in which the tax liability itself should be shown in our financial statements. In other words, given the results of the calculation of tax liability as determined by the tax experts, how do we record and reflect this liability, and the related charges, in our books and reports?

In the case of the carry-back and carry-forward of losses, the Committee on Accounting Procedure has suggested some solutions in ARB. No. 43, Chapter 10 (b). Although the language is somewhat vague in spots, it seems reasonably clear that, wherever the amounts involved are important, the Committee recommends that the "loss year" get the benefit (the credit). This is a perfectly sensible rule if we are forced to assign all items to some specific year. But do we have to do this? Isn't it possible that we should supplement our annual accountings with reports covering longer periods?

Another reporting problem is created by the practice of making direct charges and credits to surplus on the books for items which are includable in the current tax return. The solution developed thus far is to allocate the tax provision, to show in surplus the tax attributable to the extraordinary item and to charge current income with the tax on the net income (before taxes) reflected in the income statement.

Another feature which gives rise to differences between the results of business accounting and of tax accounting is the existence of legislative concessions or penalties. For example, interest on tax-exempt bonds is includable in business income, but not in income subject to tax. Lobbying expenses are part of the cost of doing business, but cannot be deducted in a tax return. Percentage depletion usually appears in a tax return, while cost depletion is found in the books, records, and financial statements of the same taxpayer. This class of differences presents no special problems in reporting because there is no offsetting tax effect in any other year. For example, the denial of a deduction for lobbying expenses is absolute; the deduction cannot be taken in some future year or carried back to some prior year. The total effect is worked out in the current year, with no accrual or prepayment of income tax involved.

Finally, we have the group of cases of prime practical importance in which the differences between tax and book income are differences of timing, not of the nature of the items included in the income calculation. For example, if accelerated depreciation is used in a tax return, but straight-line is used in the books, the recorded depreciation in the financial statements will be less than tax depreciation in the early years, and greater than tax depreciation in the later years of the life of any given asset or group of assets. These and other similar cases call for a reconciliation of the books and the tax return either through an appropriate accrual or prepayment of the tax in the books and financial statements themselves or by some other appropriate means.

Conclusion

The number of recent major developments is surprisingly large. Accounting has obviously been caught in the rapid changes which have occurred and will continue to occur. Rather fundamental changes are occurring which, in some instances, challenge the whole basis on which our present-

day accounting is constructed. Whether we find some of these changes palatable or unpalatable, we should nevertheless strive to understand what is going on, and what is the probable shape of things to come. We can then at least react rationally to the issues that confront us, and not be torn asunder by the demands of expediency or rendered impotent by our own ignorance.

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A SIMPLIFIED STATISTICAL TECHNIQUE FOR USE IN VERIFYING ACCOUNTS RECEIVABLE: A REJOINDER

RICHARD A. RIDILLA
Assistant Professor, University of Pittsburgh

BY THE courtesy of the Editor (directly) and Professor Stephan of Princeton University (indirectly), I am being allowed to append a few notes to my article which appeared in the October, 1959, issue of THE ACCOUNTING REVIEW. In that article I attempted to simplify, to some degree, a rather complex and delicate procedure—the application of statistical sampling to the verification of accounts receivable. At that writing, and even before, I had fully anticipated strong criticism of one variety or another on the grounds that (1) statistics is far too complex to be simplified to a point at which non-statisticians may make some use of it, and/or (2) accountants' thought processes can never be reduced to a mere formula. Nevertheless, I endeavored to illustrate how changes in certain important variables could alter the necessary number of customer accounts to be verified. But I also emphasized that by simplifying the technique, one also reduced the mathematical accuracy.

In the January, 1960, issue of THE ACCOUNTING REVIEW, there appeared Professor Stephan's comments of the first variety of criticism mentioned above. In this article, Professor Stephan argues that I have done more harm than good to the complete marriage of statistics and auditing at some later date. Primarily, he feels that in many respects my technique either falls short of its objective or is completely the product of wrong thinking. But by the very fact of his rather severe censure of several facets of the technique, he has endorsed others.

In the brief notes which follow, I have attempted to analyze systematically Professor Stephan's comments, and to show that most of his criticisms are, at best, against oversimplification *per se*, and that probably a more complex technique based along the same general lines as the original would result in an improvement. To comprehend this article properly, the reader should already be familiar with "A Simplified Statistical Technique for Use in Verifying Accounts Receivable," which appeared in the October, 1959, issue of this journal, and "Faulty Advice about Statistical Sampling—Some Comments on 'A Simplified Statistical Technique for Use in Verifying Accounts Receivable,'" which appeared in the January, 1960, issue.

Statistical Criticisms

Professor Stephan's major criticisms are threefold. First, he states that the

$$\sqrt{\frac{N-n}{N-1}}$$

statistical correction factor used to reduce the sample size because the population (in this case, the total number of customer accounts) is finite, or limited, should be incorporated into the original formula rather than solved separately. Second, he seriously questions my attempt to relate the accountant's evaluation of internal control and varying confidence levels, commonly used in statistical inference

(illustrated in Exhibit 1 of the original article). Finally, he questions my approach in stratifying Illustration 2 (of the original article), primarily because of its simplicity.

By incorporating the

$$\sqrt{\frac{N-n}{N-1}}$$

factor with the main part of the formula presented in my article as

$$n=\left[\frac{\frac{1}{4}R(A)}{AAT}\right]^2,$$

the accountant should overcome a weakness inherent in the original technique. Exhibit 2 (of the original article) is neither perfectly clear nor absolutely correct in its present form. The only justification for its inclusion is that it is simple. To be more specific, the Exhibit might have been titled, "Correction Factors for Finite Populations." By not incorporating the

$$\sqrt{\frac{N-n}{N-1}}$$

factor with the basic part of the formula presented, the accountant could temporarily obtain a sample size larger than the total number of accounts (the population), and this possibility was pointed out in several places in the original article, as well as quoted in Professor Stephan's comments. However, at no point did I suggest, as was indicated by Professor Stephan, that an *ultimate* sample size larger than the total number of accounts was correct, or than n in the original formula was the *chosen* sample size, even after the use of the correction factor from Exhibit 2.

After completely solving the formula, the accountant must decide how he is to proceed to verify the selected accounts. If he uses positive or negative confirmations, or both, he must also take into consideration return percentages of less than 100 per cent. Here an arbitrary estimate is involved. If all positive type confirmations are used, the accountant may have some idea of the percentage that will ultimately be reviewed and returned. But if negative type confirmations are used entirely, or even in part (in cases where observed internal control is good and there exists a large number of accounts with relatively small dollar balances), the accountant's judgment as to the number actually reviewed is little more than conjecture. Therefore, in the face of this weakness, I feel that more exacting calculations, although desirable, are unnecessary, and that simplicity should dominate.

As suggested by Professor Stephan, the formula as presented on page 550 of my original article may be incorporated with the

$$\sqrt{\frac{N-n}{N-1}}$$

correction factor for finite populations by using the equation

$$n=\frac{Nu}{N+u-1}, \text{ where } u=\left[\frac{\frac{1}{4}R(A)}{AAT}\right]^2.$$

The answer to Illustration 1 (pages 550–551) would now be

$$n=\frac{500(256)}{500+256-1}=170,$$

and the answer to Illustration 2 (page 552) would be

$$n=\frac{20{,}000(537{,}289)}{20{,}000+537{,}289-1}=19{,}282.$$

It is clear that this modification will bring about a more precise answer for n, but it should also be clear that more difficult computations are necessary in lieu of using Exhibit 2. When applying Exhibit 2 (in the original article), the accountant must get an ultimate answer for n ranging

between 10 and 38 per cent of the total number of accounts. This degree of variation seems sensible in the light of the number of customer accounts verified in current practice.

A second major area of censure stems from my relating varying confidence levels (a statistical precision concept) to the accountant's evaluation of internal control (see Exhibit 1 in the original article). In statistics, the greater the confidence levels (for example, 3.5 in Exhibit 1), the smaller the statistician's risk of being misled by sampling error. This risk cannot be absolutely eliminated as long as one must rely on incomplete data or samples. The smaller the sample size (other things being equal), the greater the risk involved. The degree of confidence or precision of measurement that the statistician ultimately accepts is related to personal judgments based upon the estimated time and cost of increasing the precision compared with the need of precision in the end use of the data. Normally, around 95 per cent accuracy (or confidence level) is used. This means that 5 times out of 100 the statistician may be misled by the sample data.

In auditing accounts receivable, or other assets, there exists a fundamental relationship between the accountant's evaluation of internal control and the degree of risk that he will accept from his sample. Certainly if the organization being audited has excellent internal control in all respects the accountant is inclined to examine and verify fewer customer accounts and at the same time accept more risk before reaching an opinion regarding the (1) existence, (2) ownership, (3) valuation, (4) accuracy of record, and (5) fairness of presentation of the account. Like the statistician, the accountant must weigh the time and cost involved in extending his examination to reach an ultimate opinion. If therefore, the degree of internal control is an important factor in determining the extent of verification, and it certainly is, it must be introduced as a positive factor affecting the statistically determined sample size.

The range of the confidence levels (from 80.0 to 99.95 per cent) in Exhibit 1, "Desired Degree of Accuracy," is arbitrary. Possibly the range should be reduced. Professor Stephan implies that the use of an 80 per cent degree of accuracy in Illustration 1 leaves too much room for another type of error—that of accepting the control account as a correct one based upon a statistically determined sample when in reality the control account is over- or understated by a material amount. To clarify this point, parts of the original Illustration 1 are reintroduced at this time.

Illustration 1—A Medium-Sized Manufacturer

Facts determined by the accountant:

1. Accounts receivable, control, per books =$175,000.
2. Number of customer accounts=500.
3. Range of individual account balances =$400 (from $200, the lowest account balance, to $600, the highest account balance).

Professor Stephan now states that I have not given sufficient thought to risks due to sampling variability by using a minimum accuracy of 80 per cent (from Exhibit 1), and that there is the possibility that verifying a sample of 182 from 500 accounts (about 36 per cent) may not be adequate to disclose a sizable error in the control account. He says "There is no discussion of how much risk one would accept that there is an actual error of more than $4,000 which is not revealed by the test. For example, if there is an actual error of $5,000 the probability is about 38 per cent that the grand total amount estimated from a sample will be between $171,000 and $179,000 and hence that the control account will be assumed correct. For an error of $8,000 there is about a 10 per cent

risk of accepting the control account as correct." Statistically, Professor Stephan is absolutely correct in his percentages for a possible dollar variance of ±\$5,000 or ±\$8,000 from the \$175,000 control account balance per books. However, his error percentages are better used by statisticians in estimating certain values of populations not as carefully controlled as is the typical accounts receivable control balance.

The \$175,000 control balance in this illustration is substantiated by the excellent internal control observed by the accountant. Does it seem reasonable that this organization, with 500 accounts ranging from \$200 to \$600, could overstate or understate these accounts by \$8,000 or even \$5,000 in the face of excellent internal control? It is possible that they could overstate each account by \$10, or every other account by \$20, or every fifth one by \$50, or even every tenth account by \$100, etc., but is such manipulation *reasonable*, especially with excellent internal control? How would you propose to over- or understate the \$175,000 control account balance by \$8,000, considering excellent internal control and about a 36 per cent verification by the independent accountant? A population composed of a number of carefully reviewed customer account balances totaling a control account balance is a far cry from a less controlled and unknown population where statisticians consider about 95 per cent as a conservative value for their confidence coefficients.

Professor Stephan's final criticism refers to Illustration 2, in which I attempted to show without undue calculations how stratification of the original population of customer accounts would help the accountant to achieve acceptable results from smaller samples. Again Professor Stephan argues against simplicity. As he suggests, it would be better to consider each stratum as an independent population, and "form an estimate of the portion of the control balance in each stratum and then combine these estimates to obtain an estimate for the entire population." This additional procedure would be an improvement, but at the same time, it would also be more complex.

Conclusion

To summarize, Professor Stephan's criticisms of my article on statistical sampling are made primarily on the grounds that, in my attempt to be understandable, I have not given due consideration to more complex statistical theory and techniques in several instances. Upon closer examination of these several instances, however, only one seems valid and reasonable. The incorporation of the

$$\sqrt{\frac{N-n}{N-1}}$$

factor into the original equation does offer better results and only slightly complicates the technique. Professor Stephan's stratification criticism is valid, but much more technical in that by my own admission I recognized that my simplified technique left more to be desired for increased statistical accuracy. Finally, the censure based on my relating varying degrees of internal control with statistical coefficients of confidence is debatable. After all, varying degrees of internal control do influence the number of accounts included in the accountant's sample. It seems reasonable to reduce the desired degree of accuracy from the sample (and the sample size) in the case of a highly controlled population under excellent internal control. The 80 per cent level, as used in Illustration 1, is arbitrary, and possibly a slightly higher percentage may meet with more general approval.

Although Professor Stephan's article

contained some excellent criticisms, it also showed several weaknesses in his understanding of the subject. First, he confuses the terms verifying and confirming, as they are used by accountants, by treating them as synonyms. The ultimate sample size arrived at by solving the formula indicates the number of accounts that must be verified to achieve the desired degree of statistical precision. The actual method of verification will depend upon the individual accountant's judgment. In practice he probably will use a combination of the following:

1. Positive confirmations.
2. Negative confirmations.
3. Proving the original charges to the accounts by reviewing authentic sales invoices, shipping records, inventory records, etc.
4. Proving by examining and identifying remittances for subsequent payment of the accounts.

In several instances, Professor Stephan confuses accounts to be verified with accounts to be confirmed.

Another weakness in his thinking is disclosed when he indicates (page 32) that (1) the purpose of sampling accounts receivable is actually to *test* the control account, and (2) that I believe the purpose of sampling accounts receivable is to *estimate* the control account balance. In the second paragraph of my original article (page 547), I clearly stated that "the purpose of an audit of accounts receivable or any other asset is to prove to the auditor's satisfaction the (1) existence, (2) ownership, (3) valuation, (4) accuracy of record, and (5) fairness of presentation of the account." It is to help accomplish these purposes that a simplified statistical formula with possible modification is justified. Review of the formula should advise the auditor to concentrate most objectively on (1) the dollar range of account balances, (2) materiality, and (3) observed internal control as factors readily affecting the ultimate sample size of accounts to be verified.

REPORTING TO STOCKHOLDERS*

Edward T. McCormick

President, American Stock Exchange

It is a real pleasure to be the guest of your organization today. I have looked forward to this occasion for the past few months for at least two reasons. It has given me a long sought opportunity to come West for a few days—a chance even to spend a day or two at my home in Arizona. But, more importantly, this visit will permit me to see again some old acquaintances in our most honorable profession. I say *our* honorable profession for I can proudly boast of the fact that I, too, am a C.P.A., a status I cherish since it was gained, as you might well know, only after many years of vigorous academic training in the field of accounting.

As a matter of fact, it is primarily because of this academic background, plus some twenty-five years of review of financial statements of one kind or another, as an assistant chief accountant and a Commissioner at the Securities and Exchange Commission and as President of the American Stock Exchange, that I am led to my topic for today.

What I have to say may not make pleasant listening to all members of the teaching and practicing elements of our profession. But you can rest assured that the criticism I express is not a layman's petulant reaction to your efforts, but a sincere effort to better the services of a proud profession, the profession of my own kind.

Nearly all of you have probably had brought to your attention, in one way or another, the results of the most recent survey of stockholders in this country. For those who may not have heard or seen this important bit of news, the study showed that in these United States there are now about 12,500,000 owners of corporate securities. In other words, there are about 12,500,000 people in this country who are part owners of the publicly-owned corporations for which members of our profession, year in and year out, prepare financial information and reports.

In this enlightened day and age one would naturally believe that these millions of owners would be among the principal targets and also the considered beneficiaries of the financial information which our profession so laboriously and expertly deduces, assembles, and presents. One would think that, at this advanced and socially significant state of our capitalistic economy, our teachers and practitioners might have created and developed an up-to-date technique for the presentation of financial information to these millions of corporate owners in a way that is both easily understood and meaningful. But what have our teachers and practitioners done along this line? I'd say very little.

Over the past several decades the accounting profession has developed procedures for recording, assembling, interpreting, and presenting data for the edification of the initiated and financially sophisticated—for the managers of corporate enterprises and the technical analysts. But you have not given anything like proper recognition to, or evidenced actual awareness of, the social-economic revolution which has broken out under your very noses. As a profession you have evidenced a blissful apathy to the growth and existence of an army of 12,500,000 owners of American industry, an army whose ex-

* This paper was presented at the annual meeting of the Association at the University of Colorado on August 26, 1959.

istence becomes even more vital to our economy in these days of ideological conflict, an army whose continued well being and numerical increase can not be assured without a proper diet of comprehensible financial information, developed, digested, and transmitted by the accounting profession.

It is startling to realize how very little the ordinary run-of-the-mill stockholder knows about the financial affairs of the company he partly owns. For this regrettable state of affairs, I place a substantial share of the blame on the shoulders of the accounting profession.

We recognize that these investors should be as fully informed as is practicable and that this means they should know what goes on financially in the company, what has it done and how is it doing, dollar-and-cents-wise. We present the information in our own inimitable fashion. The investor may examine it at his leisure, but, so far as he is concerned, it might as well be written in Sanskrit.

In the presentation of financial facts we continue to cling blindly to tradition, to the classical forms of balance sheet and income statement as the vehicles for disclosure in annual and other reports and in prospectuses. Over the past two decades, particularly, the narrative portion of annual reports and even of prospectuses has become increasingly comprehensible to the average individual, but not the balance sheet and income statement that accompany the report; these remain stereotyped and rigid behind a practically unassailable wall of convention.

But I think that now the time has come to ask ourselves how useful, really, is the traditional form of presentation to the lay investor? I wonder how many of you have ever tried to put yourselves in the position of an individual without financial or accounting training, set adrift on the sea of a formal balance sheet and income statement and attempting to find his way through to some sort of adequate appraisal of the company's financial affairs. This may sound ridiculous to you, but I know of a case where, upon receiving the balance sheet of a prosperous company, an individual became very dubious about the investment because, after observing that the total of assets equalled the total of liabilities, he concluded that the company "Owes every penny it's got." Unaware that it is only a convention that capital stock, reserves, and surplus are listed as liabilities, such an investor may well be baffled by the meaning of these accounts until they are explained.

It is extremely easy for a lay investor to mistake a dollar statement of earned surplus for actual cash on hand. He is likely to make the mistake of believing that, should he purchase an investment in the company, he would be buying a share in an earned surplus having a present value equivalent to the amount set forth in the balance sheet. These and other conventional accounting concepts, reflected in the accumulation of figures called the balance sheet, add up to an unassembled jigsaw puzzle to the non-professional.

The income statement is likely to be more pertinent and informative, but by itself it still does not permit an adequate over-all appraisal of the company.

We are so deep in the woods that we are in danger of seeing only the trees. The journals of our profession storm with disputes about accounting theory and the meaning and application of accounting concepts. But the profession has not, as yet, paid enough attention to the basic problem whether the usual *form* of presentation of accounting facts is a meaningful presentation to the untrained investor. The analyst who is accustomed to using financial statements accepts the traditional form of balance sheet and income statement as a matter of course. His

trained eye directs him to the pertinent parts of the statements containing the essential ingredients of his analysis. Because of his training he can relate the balance sheet, income statement, and analysis of surplus in such a way as to enable him to make an appraisal.

But I can well imagine many investors scanning the standard types of financial statements in despair and giving up the search because of lack of familiarity with the terminology and the basic conventions of accounting presentation. Yet, since the passage of the Federal Securities Legislation, millions of prospectuses and annual reports have been printed and distributed to investors on the theory that the usual type of balance sheet and income statement serve the end of informing the ordinary investor.

The principal difficulty seems to be that in the pursuit of fullest disclosure we have lost a simplified presentation. Many of us, trained in accounting and members of the accounting profession, are justifiably proud of the achievements of the profession in making the modern financial statement a full and complete index of the financial position of an enterprise. But we have tended to forget that only a trained individual can make use of that index. And while corporations have made significant progress in simplifying other parts of their reports, relatively little headway has been made in the form of presenting financial data.

Let me make it clear that I am not dealing here with substantive accounting concepts or with disputes in accounting theory. My concern is with methods of presentation, rather than with principles. As I see them, the balance sheet, the income statement, and surplus analysis are really an integrated presentation of the status of the enterprise. I am concerned with the fact that in disclosures to ordinary untrained investors, convention continues to require the making of separate statements, often containing over-elaborate detail, and in a form which is dictated by tradition rather than by its usefulness as an instrument of investor appraisal.

Progress in simplifying reports and prospectuses does not mean that information of importance to a skilled analyst should be sacrificed. I suggest that the *story be told* to the uninitiated and that the report be supplemented with the traditional, detailed presentation.

In my seventeen years with the S.E.C. and eight years with the Exchange I have reviewed thousands of reports and prospectuses of industrial companies. In a fairly typical set of financial statements, I have found, as a general rule, that the current asset statement alone is broken into ten items. The current liability section contains six items. And though the typical income statement may be deemed, by ordinary standards, to be an excellent presentation, yet in going from sales to net income a total of 25 items may be set forth, and from the statement of surplus at the beginning of the year to the statement of surplus at year end there is an additional ten lines of items.

The inclusion of such a statement in a prospectus destined for the use of investors assumes the fantastic proposition that an investor could and would peruse it, item by item, through this maze of disclosure. Though no single item may be out of place, every item representing one of the necessary components of a calculation of net income, still to present that multitude of items to an ordinary investor for his information and guidance is about as sensible as handing me a set of engineer's blueprints to convince me that I can safely cross the Golden Gate bridge.

Both the balance sheet and income statement of the typical company are copiously footnoted. One item alone, such

as depreciation, can be footnoted with a schedule which gives pages of detail on expenditures and retirements, breakdowns of additions to reserves in various categories by income charges, breakdowns of reserve deductions through retirements, renewals, and replacements, breakdowns of total asset and related depreciation reserves into five categories of capital assets, breakdowns of types of capital assets by cost, statements of ratios of annual depreciation accruals to the carrying value of various types of equipment—and all of the above breakdowns given for a three-year period. In addition, the note will explain the difference between charges to plant asset accounts, depreciation accounts, and maintenance and repairs, and give details as to the depletion policy with respect to certain natural resources owned by the company and a summary history of the depreciation policies for a twenty-year period.

To the trained analyst this note is a revealing statement. To the ordinary investor it is a frightening jumble of words and numbers which he cannot understand, and which, as its most likely result, gives him a phobia for reading any financial statements.

Other notes to the financial statements of a typical company may be just as exhaustive. Yet they are seriously prepared and distributed for the information of investors who have had no training in accounting or financial analysis.

So far, I have described the detail which overburdens the financial presentation. However, I think we need not only to condense and generalize the statements of financial information, but that we also need to re-organize the form of presentation.

Just as we realize that the formal financial statements really aim at an integrated presentation to an expert, so should our aim be to provide the investor with a single, integrated, simple story or picture. This should cull from the balance sheet, the income statement, and the surplus analysis whatever pertinent facts are essential to an understanding of the financial position and operating results of the company. It should present them in layman's language and in an order which follows the rational order in which an investor would normally ask for information about the company.

I cannot believe that we lack the ingenuity to develop a means of furnishing to untrained investors the essential accounting information necessary to make a reasonable appraisal of the situation of any particular company. I do not think that we must remain wedded to the idea that the information must be presented in highly technical language and in the traditional form of a balance sheet and an income statement set up in the conventional manner. I suggest we start from scratch and develop a technique for presenting this highly important information to the *layman*—to the man who cannot be expected to bring a technical background to the reading of financial statements.

I don't pretend that these goals can be achieved by a flip of the wrist. A good deal of hard thinking and re-orientation will be necessary. Nor do I think that I am necessarily outlining a readily acceptable course. Accountants who prepare financial statements and the teachers of accounting are trained in the old methods. It is easy to follow the traditional course. But in order to do satisfactorily a real job of simplifying, condensing, and integrating financial presentation, both practicing accountants and teachers will have to put aside their traditional approach. They will have to put themselves in the position of the investor in order to anticipate his questions and answer them in the simplest and most direct way.

Our economy has come to depend to a

great extent on the relatively small individual investor for the necessary supply of equity and venture capital. In order to attract that capital, industry has to tell its story. And the vital part of that story is told by the accountant.

Accounting has been useful to management. It has been useful to bankers and the large institutions. It has been useful to the taxing authorities. But the growth of share ownership has opened a new field for the profession—an opportunity to be useful to the millions of ordinary investors who supply the equity capital.

REPORT OF THE ADVISORY COMMITTEE ON PROFESSIONAL DEVELOPMENT

THE term "professional development," as applied to individual members of the accounting profession, encompasses three complementary programs, namely: a) preparatory university education, b) self-study and research, and c) organized short courses for practitioners.

One of the modern characteristics of most professions is the constant need to revise and extend these programs. Accountants are perhaps more subject to these needs than most other professionals. Not only have accountants been called upon to render an ever-widening variety of services, but the complexities of their fields of specialization continually call for more and better preparatory training and for constant vigilance to keep abreast of new developments. Since World War II many new modes of doing business have developed. Some have stemmed from public demand and acceptance for new and different products and services, others from such tax-dominated plans as sale-and-leaseback, deferred compensation, and the like. The increasing trend to larger and more diversified business units accompanied by greater decentralization of management have magnified reporting problems and have led to the development of new tools such as electronic accounting machines and computers and integrated data processing.

In this environment it is inevitable that education for accountants is changing. In the preparatory or collegiate phase, new accounting courses have been developed, new substantive materials added to traditional courses; at the same time related background courses both in business and liberal arts have been changing. Business school education has been the subject of studies which have attracted widespread attention. More particularly, accounting education has been studied anew and with thoroughness by the Commission on Standards of Education and Experience for CPAs.

In the post-preparatory phase of professional development, equally sweeping changes are taking place or are portended. Here, accountancy may have somewhat unique needs because it is a young profession which has grown very rapidly. As a consequence of this growth some of its members first entered practice with what today would be regarded as less than minimum preparation. These members have an even greater need to participate in the newly developing formal program of professional development courses.

This report concerns itself primarily with the development of organized programs of short courses aimed at the practicing accountant, offered at various stages in his development. The American Accounting Association has a special interest in this program since it is apparent that its development will, in all likelihood, affect the character of university degree programs of the future. In addition, it is recognized that accounting teachers may be able to make a contribution to the organization of this program and to the development of those approaches which are most likely to be successful. Finally, it seems evident that accounting teachers will be asked to participate actively in various aspects of the program.

Experience indicates that to achieve a well-coordinated educational or development program, a high degree of centralization of authority is necessary. Since the

various short courses envisioned in the professional development program are aimed at practicing accountants, it appears logical that the American Institute of Certified Public Accountants should have the primary responsibility for initiating programs and courses, developing materials, and establishing an administrative framework for the program. This means that the American Accounting Association, as an association, should take no responsibility beyond that which may be delegated by the Institute.

This report is designed primarily to present the concepts and types of programs encompassed in a professional development program. The report will also indicate the interests that all college teachers of accounting might be presumed to have in such a program, and the contributions which they, as individuals, might make in its development.

CONCEPT OF PROFESSIONAL DEVELOPMENT

It is now widely recognized that basic preparation for a career in accounting is best achieved through a collegiate educational program encompassing a broad cultural preparation as well as basic preparation in some of the more technical aspects of business and accounting. The initial phase of professional development would arise from practical experiences encountered in the pursuit of a professional career, study and research undertaken on an individual basis and more organized programs of an educational or developmental nature to which the practitioner might be exposed from time to time.

The area of professional development in accounting might be envisioned as encompassing *all* these educational and professional activities in which a practitioner might engage throughout his career. However, the Committee on Professional Development has directed its attention to the development of organized programs of short courses aimed at practicing accountants. Thus, regular university degree-oriented educational programs, post-graduate degree-oriented collegiate education, and remedial educational activities (such as night school classes in university degree programs, extension-type night courses, or other university-offered preparatory courses in accounting) were not given any particular attention by the Committee. These activities are pointed primarily at enabling an individual to obtain the basic foundation upon which continued professional development may be based.

The committee recognizes that the professional development of an individual practitioner rests primarily upon the effort of that individual. While an individual may avail himself of various media of continued education in his field, no organized professional development program can assure his continuing development. It is likewise recognized that some accountants continually further their professional development through a variety of individual programs of study and research. The committee, however, has directed its attention at more organized or formalized aspects of professional development through which the accounting profession might further encourage individual professional development, programs and activities which will provide the practitioner with some means of meeting his individual responsibility to progress in his profession. A profession cannot assure the continued development of its individual practitioners, but it can provide the media through which the individual practitioner may, in part at least, continue his professional development.

TYPES OF PROFESSIONAL DEVELOPMENT PROGRAMS

Outlined below are seven areas in which programs in professional development

might be established, and in which such programs are considered to be most necessary at the present time. In the initial stages of development, the professional programs will undoubtedly overlap to some extent the work offered in university degree programs. Because of a difference in approach, and because of the level at which it is anticipated these programs will be offered, this is not considered to be a serious problem. The seven areas are:

1) *Indoctrination and Staff Training*

This program would be designed for new employees of CPA firms with the purpose of bridging the gap which inevitably exists between college education, however technical it may be, and the employee's first job as a junior accountant. This program should be designed largely for staff men of public accounting firms which do not have staff training facilities of their own. The need for this kind of program exists not only because of the necessity for indoctrination and staff training for new accountants, but also to reduce the competitive disadvantage encountered by small firms in recruiting new staff men, a disadvantage which results in part from lack of such a program.

2) *Refresher Courses*

A professional development program should include short courses dealing with certain of the more professional subject matters generally considered also in degree programs. These courses should be designed for practitioners who are several years away from their university background, and whose work has carried them away from some of the basic elements of professional practice. The conduct of courses of this kind would be necessarily quite different from the conduct of a college course. The seminar or discussion group approach involving interchange of ideas and of practical experiences in application of basic principles to professional practice should be encouraged.

3) *CPA Preparation Courses*

Courses which have preparation for the CPA examination as a basic objective are considered to be an appropriate part of a professional development program. The need for such courses may vary widely from one area to another, and among prospective CPA's, depending on the extent to which CPA preparation may be available as a part of staff training programs in the larger CPA firms, and on the requirements of the particular State with regard to experience and education requirements to take the examination. The desirability of requiring a college degree in accounting to sit for the examination is well recognized, but differences in accounting programs among the universities may call for additional CPA preparation for some university graduates.

4) *Accounting Practice Administration Courses*

The need for courses of this kind, and their importance to a professional development program are obvious and need not be elaborated. For the most part, it is assumed that the courses should be directed at the experienced practitioner who holds a position of administrative responsibility.

5) *Current Development Courses*

These courses, designed to cover both innovations in professional practice, and also perhaps some of the more transitory problems which occur from time to time, would be offered to practitioners at all levels, depending on the subject matter of the particular course. Some of these courses might be permanent in nature; others might be offered for short periods (for example, courses involving new tax developments) and later withdrawn. The aim of these courses should be to help the

busy practitioner keep informed on new techniques and current thinking on a timely basis.

6) *Executive Development Courses*

Courses which involve the broad approach to problems of managing business enterprises might well be appropriate for practicing CPAs. Their importance is high-lighted by the rapidly expanding field of managerial services rendered by CPAs to business enterprise. Many courses of this kind are now being offered by the larger universities. While these may be appropriate for CPAs as well as for business executives, it seems also appropriate to suggest that programs specifically slanted towards the CPA, in his capacity as an advisor, might be a welcome addition to those executive development programs presently in existence.

7) *Special Problem Courses*

Accounting problems within particular industries are sufficiently different one from another that special "industry-oriented" courses may be appropriate, either for special sections of the country or for accounting firms which may tend to specialize in particular industry problems. Examples are insurance, oil and gas, public utilities, railroads, etc. For the most part, courses of this kind, even though fundamental in nature, are too narrow for university programs.

Implementation of the Program

Recommendations for types of instruction and teacher qualifications are summarized in the table below.

Experiences with executive development programs, various short courses, and related activities clearly indicate the need for a learning atmosphere, for indoctrinating the participants with the extreme importance of the educational program in which they are engaged, and for the development of various kinds of incentives which will contribute to the hard work necessary for any successful educational venture. The creation of a "holiday" atmosphere must be discouraged. Pro-

PROFESSIONAL DEVELOPMENT COURSES

Types of Professional Development	To Whom Directed	Subject Areas Specific Examples	Types of Instruction most Appropriate	Recommended Background of Teacher
Refreshers	Practitioners of all levels out of college 6 to 7 years or longer	Applications of basic principles in theory, in auditing, in taxation	Seminars; cases and problems to be solved by participants	Senior university accounting professors
Indoctrination (for new employees)	Entering junior accountants from firms which do not have adequate staff training programs	Conduct in clients' offices; working papers; writing brief "situation" reports	Audit practice set case; short discussion questions and cases. Small discussion groups	Practitioners chosen for ability to teach. Level may vary from senior to partner
Special Problems	Practitioners with 2 or more years' experience	Special industries such as insurance, oil & gas, utilities, institutions	Combination of lectures and workshops in which specific problems are assigned	University professors or practitioners with experience in field
New Developments	Practitioners with any range experience	Computer programming; statistical sampling; elements of mathematical models	Lectures; outside reading and discussion sessions	Any qualified person
Executive Development	Partners, principals, and managers	Human relations, marketing research, finance and economics	Traditional approach to executive development; lectures and group solution of cases	University professors, visiting lecturers from banking and industry
CPA Preparation	Juniors, semi-seniors	Principles of auditing, commercial law, theory, and practice	Intensive solution of problems in class; condensed lectures	University professors
Practice Administration	Partners, principals	Fees; partnership agreements, staff administration, recruitment; internal reports and records	Lectures; workshops with discussion leader but lots of participation	Practitioners from principal or partner level

grams which do not provide sufficient time for individual research and preparation are not likely to succeed. Physical arrangements should be provided which are as free from distraction as possible. The individual participant must be given a clearly defined responsibility for preparation of assignments, for meaningful organized participation in discussion groups, and for some tangible evidence of accomplishment.

For the most part it would seem that university campuses provide the most desirable sites for the majority of these programs, and it is felt that a high degree of cooperation from the universities can be anticipated. These institutions should not seek to give courses for which they do not have suitable personnel, though they might make their physical facilities available for such courses. Colleges and universities are entitled to reasonable compensation for the use of facilities, and their staff members who teach the proposed courses (almost always as extra work or when not regularly employed in teaching) are similarly entitled to reasonable pay for their preparatory and teaching efforts. Teacher compensation should compare favorably with executive development programs now in existence.

The entire program should be largely self-sustaining. The practitioners who participate or who send their employees should expect to pay the cost of the operation and should not expect public or private institutions or faculty personnel to donate their services or to be compensated on a token basis.

SUMMARY

As indicated above, the increasing demands on CPAs and the ever-widening scope of their activities calls for a professional development program which is a combination of university education, self-study and research, and an organized program of courses directed to the professional accountant. The responsibility of each professional accountant to strive to improve his own capabilities through continued study is paramount. A mature profession likewise assumes a responsibility to develop a program to provide the means by which individuals within the profession can continue to develop in a professional manner throughout their careers. In the accounting profession this responsibility falls largely upon the national organizations of professional accountants.

JOSEPH CERNY
CHARLES T. ZLATKORICH
ARTHUR R. WYATT
PAUL FERTIG, *Chairman*

PLANNING FOR PROFITS—HOW SOME EXECUTIVES ARE DOING IT

LEON E. HAY
Associate Professor, Indiana University

"PROFIT is the first element of cost!" is the credo of a prominent Indiana industrialist. Unconventional as his view may be, it epitomizes a logical approach to the problem of producing a satisfactory rate of return on funds invested in a business enterprise.

Conventionally, profit is a remainder after relevant costs, expenses, and losses have been deducted from the gross revenue earned by a business during an accounting period. The conventional historical view is of little help to management in selecting financial objectives and in determining the course to be followed to attain them. Under any economic conditions, management is deserving of all possible assistance in the accomplishment of its task. Consequently, "profit planning" is a term with tremendous appeal.

In recent years articles and books by the score have incorporated "profit planning" into their titles. Much of the material presented in that literature is the same as academicians have been peddling for decades as "break-even analysis." The practical applicability of traditional break-even analysis in business enterprises has long been suspect because the static conditions it assumes are not found in practice. This leads businessmen to ask: *Can I plan the profits of my business?*

The business executive needs a practical answer to his question, not a theoretical one. In an effort to get a practical answer, executives of fifteen corporations with a reputation for experience with profit planning were interviewed.[1]

The answer is: *Yes, business profits can be planned with a reasonable degree of success.* From their own experiences, and from the experiences of other firms known to them, the business executives interviewed agreed that profit planning practices had been helpful in recession as well as boom, in periods of rapid growth as well as periods of more stable operations.

"Profit planning" is a long run concept. It may, in fact, be a misleading name for the concept. The objective of profit planning, as practiced by successful businesses, is to maximize the long run financial health of the enterprise. This may not be the same thing as maximization of long run profit, and rarely would be the same thing as maximization of short run profits.

Profit planning is related to budgeting, but involves an active outlook instead of a passive. Profit planning implies the predetermination of objectives and the preparation of plans to meet those objectives. Budgeting often involves only a representation of what the results will be if present plans and policies are carried out in the forecasted economic climate. Profit planning, like budgeting, extends to all phases of producing, selling, and financing activity for the coming period and it anticipates needs beyond operations for the coming period through means of the capital expenditures plan.

To summarize, profit planning, as performed by successful businesses, involves:

1. Setting over-all long-range corporate objectives.
2. Determining, in general, the means the corporation should use to reach its long-range objectives.

[1] Research on which this paper is based was financed by a grant to the author by the Indiana University School of Business.

3. Setting specific corporate objectives for the coming year consistent with the long-range objectives.
4. Determining specifically the means the corporation should use to achieve its objectives for the coming year.

SETTING LONG-RANGE OBJECTIVES

There was a general feeling among executives interviewed that long-range goals should not be set too precisely. The usual approach to goalsetting lies in providing general answers to the question, "Where do you plan to go in each *major* segment of your business?"[2] Operating management, not the staff, is to provide the answers.

The answers to the above question may be in terms of share of market, quality reputation, sales dollar volume, contribution to owners' equity, or simply survival. Whatever the objectives may be they have financial implications. Even organizations with purely philanthropic objectives must plan in order to secure income equal to expected outgo.

A very popular means for expressing the financial objectives of profit-seeking businesses is the *return on investment.* According to executives interviewed, return on investment (ROI) is one of the key factors in their profit planning systems. Although there was general agreement among these executives as to the desirability of expressing ROI as the mathematical product of capital turnover and return on sales, there was general disagreement as to the items which are properly includable in these components.

In most of the companies visited, return on investment goals are set for each major segment of the business—division, product line, or territory—as well as for the business as a whole. Some executives reported experimentation with individual product ROI computations, but the general consensus was that such extreme detail was not worth the effort it required.

DETERMINING MEANS TO REACH LONG-RANGE OBJECTIVES

After long-range over-all objectives have been established for the enterprise and its major segments the problem of attaining those objectives remains. A memorandum prepared by the Vice President—Long Range Planning of Carrier Corporation recommends that an "audit of corporate resources and limitations by individual units, both Staff and Line, by divisions and finally as a whole" be accomplished after the objectives are set and before the actual long-range plans are prepared.

The next step, in Carrier Corporation, is to outline a program to raise the level of corporate resources to that required to meet the established objectives. Actual long-range plans are of two kinds:

1. Those related to present operations
2. Those in advance of present operations
   a. New products
   b. New markets
   c. Acquisitions

Divisional long-range planning in the Carrier Corporation is the responsibility of the head of each operating division. Staff divisions assist operating heads by providing the following information:

Business Research

Economic Developments
Industry Trends
Market Potentials
Market Shifts, including changes in consumer preference

Central Research and Development

New Products
Improvements to Existing Products

Facilities Planning

New Facilities
Maximum Usage of Existing Facilities

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[2] For an interesting article about long-range planning see Tully Shelley, Jr. and Andrall W. Pearson, "A Blueprint for Long-Range Planning," *Business Horizons,* I (Winter, 1958–1959).

Corporate Development

Diversification
Acquisitions

Financial Division

Interpretation of Financial Objectives
Assistance in Preparation of Financial Data

SETTING SPECIFIC SHORT-TERM OBJECTIVES

Integration with Long-Range Objectives

The determination of long-range objectives and the preparation of plans to meet those objectives often indicate that the long-range goals are not attainable in all respects within the forthcoming fiscal period. It becomes necessary, therefore, to set short-range goals which are attainable within the coming fiscal year. The short-term goals must be consistent with the long-term goals; in fact, they may be thought of as stepping stones to the long-range goals. For example, the top management group of one of the firms interviewed believed that the ROI of a certain division should be in the neighborhood of 40% before taxes, although it had actually been experiencing an ROI of approximately 19%.

New divisional management was instructed to plan divisional operations to yield the 40% return within five years. The divisional management set as its goal for the first year 25% ROI, and keyed its planning to a growth to 30% the second year, 35% the third, and 40% by the end of the fourth year. It should be emphasized that the divisional management was not allowed to merely "plug in" the ROI figures the corporate management wanted, but was required to present well-thought-out plans to boost sales and trim costs sufficiently to achieve 25% ROI in the coming year, and to continue product and market development work as well as cost reduction programs to increase ROI further in succeeding years.

Divisional product and market development work must, of course, be integrated with corporate-wide long- and short-range plans. Some corporations visited have delegated very little authority to divisional management to engage in product and market research and development. Others, generally the larger corporations, retained fundamental research and determination of possible new products as a function of a central Research Department, but delegated improvement of existing products and development of new products to divisional organizations. Marketing research is usually performed by a corporate staff group, often, in smaller firms, in conjunction with outside consultants.

Differentiation from Long-Range Objectives

Common sense tells us that short-term objectives must occasionally deviate from the pattern set by the long-range objectives. Long-range planning can, with reasonable accuracy, assume a relatively steady rate of change in the external conditions which affect a firm's sales and costs. Short-range planning, however, must take into account the rather abrupt swings away from the trend lines of these external conditions.

Interviews with corporate financial executives during 1958 furnished abundant evidence that yearly profit planning in times of recession can guide the enterprise around some of the rough spots—if the planning is flexible. The thought expressed by several executives was, "Profit Planning did not keep us from making *any* mistakes, but it did prevent us from making *some* and it enabled us to minimize the seriousness of others."

DETERMINATION OF MEANS TO REACH SHORT-TERM OBJECTIVES

Profit planning, whether long-range or short-range, has two aspects. One, the

planning related to present operations, and, two, the investigation and evaluation of possible alternative courses of action to modify present operations.

Operating Plans

Profit planning related to present operations is essentially the same thing as business budgeting. The viewpoint of budgeting, however, is usually passive: What will we sell if we keep on selling the same products through the same channels? How many hours do we need to run the factory to produce the number of units needed to meet forecasted sales?

The viewpoint of profit planning, on the other hand, is active: What return on investment is optimum? What Capital Turnover is it possible to achieve? Considering the behavior of our costs and revenues, what sales mix will yield the desired return on sales? What changes in our products, our marketing strategy, our production policies, our inventory policies, and our financing policies will facilitate the needed changes in Sales, Earnings, and Capital?

In effect, the approach of the profit planner is to invert the traditional Income Statement in the following manner: (Figures inserted to clarify the illustration.)

Desired Retained Earnings		$200,000
Desired Dividend Payment		200,000
Desired Earnings After Taxes		$400,000
Federal Income Taxes		400,000
Desired Earnings Before Taxes		$800,000
Fixed Costs:		
Interest on Bonds	$ 50,000	
Depreciation	50,000	
Salaries	150,000	
Insurance & Other	50,000	300,000
Desired Excess of Sales Revenue over Variable Costs		$1,100,000

The end figure in the statement above, "Excess of Revenue Over Variable Costs," is sometmes labeled "Contribution to Overhead and Profit" and sometimes, "Marginal Income." Getting from that point back to the practical problem of determining the sales mix that will produce the desired marginal income requires considerable knowledge of the cost behavior of the product lines, as well as their price-volume behavior. It is to be expected, therefore, that the better the cost accountant, the more successful profit planning is. This thesis is borne out by the experiences of the fifteen companies studied. Some, Armstrong Cork and Dresser Industries are obvious examples, have devoted a great deal of cost accounting talent to their planning programs and have achieved excellent results. Among other firms interviewed, several instances were found which proved the converse—intensive cost studies had not been undertaken systematically, and management was finding the profit planning less useful.

Evaluating Alternatives

The evaluation of certain proposed courses of action falls within the sphere of profit planning. Some of these proposals may be classified in the following manner:

- Production
  - Change technology (method)
  - Change capacity
  - Replace existing equipment
  - Make or buy components (or products)
- Sales
  - Change method of distribution
  - Add or drop territories (or salesmen)
  - Change channels of distribution
- Financial
  - Lease or purchase
  - Equity or debt financing

Techniques used to evaluate such alternatives from the profit-planning standpoint generally fall into two patterns:

1. Determining return *on* investment
2. Determining return *of* investment

The first, determining return *on* investment, may take the form of computing the return on the *added* investment, or it may take the form of computing the ROI

of the division, or firm, giving effect to the proposed course of action. In either case the effects of the proposed course of action upon variable costs, upon fixed costs, and upon sales dollar volume must be calculated, for these are the factors which affect return on sales, and thereby return on investment.

The ROI computation is sometimes prepared on an annual basis, and sometimes on the estimated effective life of the proposed project. The approach used by General Foods, for example, is to relate the *average annual profit* before taxes in the first five years, and the first ten years, of a project's life to the *average funds employed* in the respective periods. The "average annual profits" in the General Foods computation includes all items of income and expense usually included in a division's income statement, including portions of existing overhead. One provision of their instructions is particularly interesting:

> When profits of other company products are favorably, or unfavorably, affected by the project under review, adjustments should be made, on a before tax basis, to the average profit and loss estimates for the new project in order to reflect the incremental profits accruing to the corporation.

"Average funds employed," in the General Foods practice, are calculated for each period based on depreciation rates used for accounting purposes by the division.

The second technique used to evaluate alternatives determining return *of* investment, is frequently called "computing the pay-out period." As many ways of calculating this are found as are ways of calculating ROI. The procedure used by General Foods relates the "estimated funds employed in the payout year to the accumulated sales income less out-of-pocket expenses through the payout year." Examples of out-of-pocket expenses are: additional realty taxes, insurance, direct and indirect shipping and receiving, maintenance, supplies, material, freight, and "any other additional cash outlays resulting from the project." Non-out-of-pocket expenses are those which would be borne by existing products within the division if the proposed project were not authorized, as well as depreciation and other non-cash items.

CONCLUSIONS

Profit planning is not merely a catchphrase. Profit planning is the predetermination of financial objectives and the preparation of plans to attain them. It is used by executives of firms of widely varying size in a number of dissimilar industries as a guide to the optimization of the long-run financial condition of the enterprise. It is used as a device to motivate sales, production, and financial executives to understand the effects of their operating plans and their proposed alternative courses of action upon *all* the functions of the business.

MEASURES OF THE GOVERNMENT SPENDING PROCESS

M. L. WEIDENBAUM
Boeing Airplane Company

THIS paper examines the availability of series on the various stages of the Federal Government spending process and the problems involved in filling the major gaps. The concern with data on the various stages of the process arises from the possibility that, under various circumstances, each stage of the process can exert an important impact on economic activity.[1] There are four major stages of the Federal Government spending process and this paper will deal with each: (1) the granting of appropriations and other types of new obligational authority by the Congress, (2) the placement of contracts and incurrence of other budget "obligations" by Federal agencies, (3) the production on the government orders, and (4) the payment by the Federal Government.

NEW OBLIGATIONAL AUTHORITY

The annual budget document shows new obligational authority for three years: the fiscal year most recently completed, the current fiscal year, and the following fiscal year.[2] The latter two figures are, by their very nature, *ex ante* estimates. No estimates are prepared on a monthly or quarterly basis.

The absence of monthly or quarterly totals of new obligational authority may not be very important ordinarily due to the annuality of the appropriation cycle. The bulk of the funds for a given year are appropriated within a period of a few months around the beginning of the fiscal year and, hence, it is the differences in the annual totals for consecutive years or between the amount requested and the amount approved which are significant. In case of sudden and large changes in government spending programs, however, the timing of specific grants of authority may be important, particularly in gauging the impact on business and consumer anticipations.

Table 1 provides a series on new obligational authority containing estimates taken from recent budget documents. The data for earlier years have been adjusted to the concepts and coverage used in the Federal Budget document for 1958. In addition to appropriations, new obligational authority includes contract au-

TABLE 1

NEW OBLIGATIONAL AUTHORITY GRANTED BY THE CONGRESS

Fiscal years. In billions of dollars

Year	*New Obligational Authority*
1950	49.3
1951	82.9
1952	91.4
1953	80.3
1954	62.8
1955	57.1
1956	63.2

Note: Figures for earlier years have been adjusted to the concepts and coverage used in the budget for 1958.
Source: Budget documents for the fiscal years 1951-1958.

[1] *Cf.* Murray L. Weidenbaum, "The Federal Government Spending Process," in U. S. Congress, Joint Economic Committee, *Federal Expenditure Policy for Economic Growth and Stability*, Washington, Government Printing Office, 1957, pp. 493–506.

[2] *Cf. The Budget of the United States Government for the Fiscal Year Ending June 30, 1959*, Washington, Government Printing Office, 1958, or earlier budget documents.

thorizations, authorizations to expend from debt receipts, and reappropriations. The common characteristic of these various types of budget authorizations is that they empower Federal agencies to obligate the Government to make expenditures in the future.

The reported figures on new obligational authority exclude the operations of the trust funds and the government-sponsored corporations, whose transactions are not included in budget expenditures. However, they include all major changes in government spending programs affecting current output. The trust funds primarily disburse transfer payments from social insurance contributions received in earlier periods; the sponsored enterprises primarily engage in banking and insurance activities. These activities generally do not require annual Congressional grants of new obligational authority.

The detail on new obligational authority classified by agency may be used to derive the amount of new authority for the major procurement activities, such as those for military programs. However, available detail is insufficient to permit the derivation of figures for major economic categories, such as purchases of goods and services, transfer payments, subsidies, etc. The following section contains such information on an obligations basis.

OBLIGATIONS INCURRED

There is no currently available series on the total obligations being incurred by Federal agencies. However, the information on the component parts is available as a result of the requirements of internal financial and budgetary control.

Annual series. The annual budget document lists obligations for each individual appropriation account, but does not contain any total for the entire government or any other form of summarization.[3] For the past several years the Bureau of the Budget has prepared for internal use tabulations summarizing the obligation schedules for each individual budget document.

Even if the lack of public distribution is disregarded, the reporting lag is quite serious. Actual figures for a given year are not available until more than six months after the close of the year. Also, no monthly or quarterly breakdowns are prepared.

Table 2 contains the figures for this series based on data supplied by the Bureau of the Budget. Historical adjustments have been made to take account of recent changes in the concept of what is included in the budget totals. Not all the obligations incurred will result at a later date in budget expenditures. The obligations of business-type enterprises such as the Post Office, which are reported on a "gross" basis, are offset in good measure by the receipts from the sale of postage stamps, etc.; only a portion of these obligations actually result in net budget expenditures.

Also, there is some duplication when one government agency places an order with another government agency. In such cases, the ordering agency usually obligates its funds for "other contractual services" or other appropriate object and the producing agency records obligations as they con-

TABLE 2
OBLIGATIONS INCURRED BY THE FEDERAL GOVERNMENT
Fiscal years. In billions of dollars

Year	*Amount*
1950	44.1
1951	83.1
1952	104.6
1953	85.6
1954	65.7
1955	74.7
1956	80.3

Source: U. S. Bureau of the Budget, tabulations of obligations by object, adjusted to conform to the coverage of budget expenditures in the 1958 budget.

[3] The 1959 Budget contains, for the first time, annual totals of obligations incurred, by agency.

tract for products and services necessary to produce the item. On the other hand, obligations for the budget year exclude obligations based on supplemental appropriations proposed for later transmission for which the budget documents reflect no detailed obligations schedule.

Quarterly series. Federal agencies furnish reports on each appropriation account, generally at monthly intervals. These reports include data showing the cumulative amount of obligations incurred under the given appropriation since the beginning of the fiscal year. The Federal regulation provides that these reports shall be submitted not later than 20 days after the close of the period for which the report is made.[4]

These reports are received by the Bureau of the Budget on an individual appropriation account basis and are reviewed on that basis. To the knowledge of the writer, no attempt is currently made to review this measure of the progress of government programs on an aggregate rather than a piecemeal basis. In earlier years, the Treasury Department issued a monthly report, popularly known as the *White Book*,[5] showing the total amount of obligations incurred by Federal agencies as reported under Budget-Treasury Regulation No. 1. This publication was discontinued after the June 30, 1949 issue.

On the basis of a number of available sources, the writer has prepared a rudimentary series showing Federal Government obligations incurred, by quarters. This series is presented essentially for illustrative purposes. More exact series could be prepared by the Government, provided that the agencies involved were directed to do so. The derivation of the quarterly obligations series is as follows:

Department of Defense (military functions) and foreign military assistance. The obligation figures for this category were obtained from the Department of Defense release, ***Monthly Report on Status of Funds by Budget Category*** (EFAD 340).

Interest. The figures for this category were obtained by using the data on budget expenditures for interest reported in the monthly ***Treasury Bulletin***. This could be done because interest payments on the public debt are recorded both as budget expenditures and as obligations when the payable interest accrues rather than when cash actually is paid. This category covers approximately 10 per cent of the total annual obligations at the present time.

All other programs. For historical periods, the annual obligations figures (other than interest and defense) can be converted to quarterly estimates by reference to the seasonal patterns which Federal procurement activities have generally followed through the years. The derivation of this component is explained below.

There is usually a high rate of obligating during the first few months of the fiscal year as the agency commits its new funds for the programs which it has already planned. A downturn in ordering usually takes place in the fall and carries through until the spring. A sharp increase in obligations occurs in the closing months of the fiscal year, due in part to the desire of agency officials to fully obligate their funds by the close of the fiscal year to avoid "losing" unobligated funds. Ordinary prudence would dictate to an administrative official that he maintain, in effect, an emergency fund for unforeseen contingencies by holding up until the end of the fiscal year outlays for certain desirable but postponable items, such as replacement of obsolescent equipment.

This assumed seasonal pattern of Federal purchasing has been affirmed by the

[4] U. S. Bureau of the Budget, *Budget-Treasury Regulation No. 1*, Washington, 1952, sections 1 and 41.

[5] U. S. Treasury Department, *Financial Statements Relating to the United States Government, Obligations, Expenditures, and Balances under Appropriations and Contract Authorizations*, Washington.

limited studies which have been made on the subject. An analysis of government purchasing for the Temporary National Economic Committee noted the concentration of government purchase orders in the latter part of the fiscal year 1938.

Thirteen per cent of that year's obligations for 45 agencies studied were incurred in June 1938, whereas only 8⅓ per cent would have been incurred if the purchases had been distributed equally among the twelve months.[6]

In his study of military procurement during World War II, John Perry Miller noted the tendency for the award of contracts to be "heavy" in the second quarter of each calendar year (the last three months of the fiscal year). He states that this was clearly a reflection of the desire of the agencies to commit funds before the end of the fiscal year to avoid the lapse of unobligated amounts.[7]

The monthly obligation series for the last several fiscal years reported by the Treasury *White Book* also generally support the hypothesis. An analysis of the *White Book* renders the following quarterly distribution of the non-defense, non-interest obligations of the Federal Government.[8]

First quarter	28 per cent
Second quarter	18 per cent
Third quarter	25 per cent
Fourth quarter	29 per cent
Total	100 per cent

The above percentages have been applied to the "all other programs" portion of annual Federal obligations incurred in order to obtain a quarterly distribution of non-defense, non-interest obligations for the fiscal years 1951–1956. The results are contained in Table 3.

Although different assumptions as to the precise quarterly distributions would have yielded different figures, the orders of magnitude and the direction of movement would be essentially similar. However, the important movements—both expansions and contractions—during this period were taking place in the defense programs. In

TABLE 3

OBLIGATIONS INCURRED BY THE FEDERAL GOVERNMENT, BY QUARTERS

Fiscal years. In billions of dollars.

Year	*Quarter*	*Defense*	*Interest*	*Other*	*Total*
1951	First	8.6	1.1	7.8	17.5
	Second	8.7	1.3	5.0	15.0
	Third	16.1	1.2	7.0	24.3
	Fourth	16.2	2.0	8.1	26.3
	Total	49.6	5.6	27.9	83.1
1952	First	13.0	1.1	10.3	24.4
	Second	13.0	1.7	6.6	21.3
	Third	15.3	1.1	9.2	25.6
	Fourth	20.6	2.0	10.7	33.3
	Total	61.9	5.9	36.8	104.6
1953	First	16.8	1.1	9.1	27.0
	Second	10.4	1.9	5.9	18.2
	Third	10.8	1.1	8.2	20.1
	Fourth	8.5	2.4	9.4	20.3
	Total	46.5	6.5	32.6	85.6
1954	First	6.5	1.0	8.2	15.7
	Second	6.0	1.8	5.3	13.1
	Third	6.9	1.2	7.4	15.5
	Fourth	10.5	2.4	8.5	21.4
	Total	29.9	6.4	29.4	65.7
1955	First	8.0	1.1	9.2	18.3
	Second	8.7	1.9	5.9	16.5
	Third	8.5	1.1	8.3	17.9
	Fourth	10.1	2.3	9.6	22.0
	Total	35.3	6.4	33.0	74.7
1956	First	6.4	1.7	9.2	17.3
	Second	9.4	1.7	5.9	17.0
	Third	10.7	1.8	8.2	20.7
	Fourth	14.0	1.7	9.6	25.3
	Total	40.5	6.9	32.9	80.3

Source: Table 2; Office of the Comptroller of the Department of Defense, table dated August 26, 1953; *Monthly Report on Status of Funds by Budget Category*, June 30, 1956, p. 33; *Treasury Bulletin*, August issues, 1951–1956, p. 3.

[6] Clem C. Linnenberg and Dana M. Barbour, *Government Purchasing—An Economic Commentary*, Temporary National Economic Committee, Monograph No. 19, Washington, GPO, pp. 144–145.

[7] John Perry Miller, *Pricing of Military Procurements*, New Haven, Yale University Press, 1949, p. 25.

[8] U. S. Treasury Department, *op. cit.*, issues for June 30, 1946–June 30, 1949.

future periods, movements in non-defense programs—expansions or contractions in social welfare, resource development, or transportation activities—may be the dominant feature in Federal spending programs, and the rough approximations used here might not suffice so readily. Particularly in such cases, the Federal Government would need to re-evaluate the decision to eliminate the *White Book*. In that event, a quarterly or even a monthly obligation series could be prepared currently and with greater precision than possible here.

As a byproduct of the work involved in preparing quarterly figures on total obligations incurred, more detailed information was also obtained which could be used for other purposes.

The budget document allocates obligations to fifteen different "objects," which in turn can be related to relevant economic categories. Table 4 contains the following major subdivisions of Federal expenditures on national income and product account: purchases of goods and services; transfer payments; interest payments; and grants-in-aid. Obligations which do not involve current output, such as loans and awards for claims, are placed in a category of "financial transactions."

Each object class was placed in the economic category in which the bulk of the obligations were incurred. For example, object class 10, "Lands and structures," contains both purchases of land and existing capital assets, as well as new construction. It was placed under "purchases of goods and services" because the obligations for current output predominate.

TABLE 4

OBLIGATIONS INCURRED BY THE FEDERAL GOVERNMENT BY ECONOMIC TYPE AND OBJECT CATEGORY

Fiscal years. In billions of dollars

	1950	*1951*	*1952*	*1953*	*1954*
PURCHASES OF GOODS AND SERVICES					
From the public sector					
01. Personnel	10.5	13.5	18.1	20.0	19.0
From the private sector					
02. Travel	.3	.6	.9	.9	.8
03. Transportation of things	.9	1.4	2.2	2.4	1.9
04. Communication services	.1	.1	.2	.2	.2
05. Rents and utilities	.2	.3	.5	.5	.4
06. Printing	.1	.1	.2	.1	.1
07. Other services	1.9	5.0	5.5	4.9	4.8
08. Supplies and materials	4.7	17.7	22.0	17.1	11.8
09. Equipment	4.5	23.0	34.2	17.2	8.1
10. Lands and structures	1.6	3.8	3.3	5.5	2.6
Total, private sector	14.3	52.0	69.0	48.8	30.7
TRANSFER PAYMENTS					
12. Pensions and insurance	4.8	4.1	2.1	3.1	3.1
INTEREST PAYMENTS					
14. Interest	5.8	5.7	5.9	6.6	6.5
GRANTS-IN-AID					
11. Grants and subsidies	6.9	6.7	8.7	6.5	6.3
FINANCIAL TRANSACTIONS					
13. Refunds, awards, etc.	.1	.2	.1	*	.1
15. Taxes and assessments	*	*	*	*	*
16. Investments and loans	1.3	.8	.9	.6	.8
Undistributed	.4	.1	−.2	*	−.8
Total obligations	44.1	83.1	104.6	85.6	65.7

* Less than $50 million.

Source: Compiled from unpublished worksheets on obligations by object, prepared by the Bureau of the Budget.

Purchases of land and existing capital assets come to about $50 million[9] out of total Federal obligations for lands and structures of upwards of one or more billion a year.

The initial rise in the fiscal year 1951 in purchases from the private sector is clearly shown in Table 4. These purchases increased from $14.3 billion in 1950 to $52.0 billion in 1951, a rise of 260 per cent. The downturn in the fiscal year 1954 can also be seen as purchases from the private sector declined from $48.8 billion in 1853 to $30.7 billion in 1954, a decrease of almost two-fifths.

PRODUCTION ON GOVERNMENT ACCOUNT

In order to measure the production in the private sector on government account, a breakdown is needed in the current reports on business inventories showing how much relates to private orders and how much to government orders. Such information is not now available.

There are many problems involved in obtaining inventory data generally. It would be particularly difficult to obtain a breakdown of inventories between "government account" and others. Large amounts of military and other equipment ordered by the Government are made in the same plants as producers' equipment and often from similar parts or materials. Many goods purchased by the Government are similar to or identical with civilian goods and are often made alongside them, with orders sometimes filled from common stocks.

In a study of inventory statistics conducted under the auspices of the Federal Reserve System, it was noted that information on the portion of private inventories which is on "government account" would be especially significant during periods of sharp changes in Federal purchasing. The study group recommended:

> . . . that studies be undertaken of means for estimating the proportion of manufacturers' inventories and associated data that are defense related. If feasible, estimates should be published at times when high levels or changes in level of defense activity make such information particularly significant.[10]

The Congressional Joint Economic Committee, for whom the study on inventories was prepared, listed the above recommendation as first in the category of "Recommendations on longer run needs." The Committee went on to state that the grouping of certain recommendations under a longer run program reflected the technical difficulties involved and the developmental work required to carry them out.[11]

A limited attempt at measuring the amount of government-ordered production can be made through the use of the quarterly reports on the financial position of American corporations, which are jointly prepared by the Federal Trade Commission and the Securities and Exchange Commission. These reports, in presenting a consolidated balance sheet of corporations, show the amounts receivable by business from Government and the amounts advanced by Government, usually in the form of progress payments. These figures can be taken as a rough indication of the amount of production which has been completed and not yet paid for.

There are many limitations to this method. The FTC-SEC reporting system itself is still rudimentary and a number of companies do not list receivables from the Federal Government separately in their reports.[12] Also, the receivable items meas-

[9] "1954 National Income Supplement," *Survey of Current Business*, p. 146.

[10] Committee on Inventory Statistics, *Report of Committee on Inventory Statistics*, Washington, Board of Governors of the Federal Reserve System, 1955, p. 440.

[11] U. S. Congress, Joint Committee on the Economic Report, *1955 Report of the Subcommittee on Economic Statistics*, 84th Congress, 1st Session, Washington, GPO, 1955, pp. 5–6.

[12] Many companies have complained that they have

ure a later stage of the process than is desired. They represent the completion of a certain amount of productive effort from the accountant's viewpoint of liability; the ideal measure would be the actual amount of production being carried on and the actual amounts being paid to the factors of production. Finally, in the case of continuing or "follow-on" orders, the levels of inventories and receivables remain fairly constant over an extended period, although considerable amounts of production are carried on and completed.

Nevertheless, this series provided a helpful indication of the amount of production currently being performed on government account in World War II. For example, at the outset of the defense program in December 1939, receivables from the Federal Government of 1,228 registered corporations were only $21 million. In December 1941, the time of the attack on Pearl Harbor, these receivables were still only $525 million. By December 1943, the peak period of war production, they had risen to $4,066 million. As of December 1944, these receivables totalled $3,780 million and by June 1945, they had declined to $3,323 million.[13]

The fluctuations in this series in recent years have been on a smaller scale. For example, this series shows the build up of private work on government orders during the Korean mobilization, but to a very limited extent. Net receivables from the Federal Government increased by $800 million during the fiscal year 1952 and by an additional $300 million during the following year. In the fiscal year 1954, the trend was reversed and those receivables declined $300 million. An additional decline of $300 million was registered during the following year.[14] These movements correspond to the general sequence of the Korean military procurement cycle, but the amplitude of the fluctuations registered are so small as to make the series of very restricted usefulness.

Another possibility of the measurement of private production on government account is from the viewpoint of the Government rather than that of the supplying firms. It is only in recent budgets that figures have been included on the total obligated (but unpaid) balances of appropriations carried into a given fiscal year.

An examination of these figures reveals a reduction of almost half in these balances during the fiscal years 1954 and 1955, indicating substantial completion and delivery of the items ordered in previous years and also the efforts of the administration to reduce the level of spending. Likewise, the estimated rise in these balances in the fiscal year 1956 and 1957,[15] is an indication of increases in current government procurement and rising expenditures in later years.

PAYMENTS FOR GOVERNMENT GOODS AND SERVICES

The measures of the final stage of the government spending process are the most highly developed and most frequently employed. The series on budget expenditures is reported in the *Monthly Statement of Receipts and Expenditures*, issued by the Treasury Department. Estimates, on a fiscal year basis, are contained in budget documents and midyear budget reviews. Historical data are contained in the budget document and in the monthly *Treasury Bulletin*.

The Treasury version of the cash-con-

difficulty in obtaining reports from the Government as to what their receivables are (accounts payable on the Government's books). Carmen G. Blough, "Confirmation of Government Receivables," *Journal of Accountancy*, October 1955, p. 69.

[13] Securities and Exchange Commission, *Working Capital of 1228 Registered Corporations*, release dated December 5, 1945.

[14] Securities and Exchange Commission, releases on working capital of U. S. corporations.

[15] Federal Budget Documents for the fiscal years 1955–57, p. A6.

solidated statement appears each working day in the *Daily Statement of the United States Treasury*. The Budget Bureau series, Federal payments to the public, appears monthly in the *Treasury Bulletin*. Estimates on a fiscal year basis are contained in the budget document and in the mid-year review of the budget. Historical data for the Treasury series are contained in the *Statistical Abstract of the United States*.

Federal purchases of goods and services are reported quarterly by the Department of Commerce. The more inclusive measure, Federal expenditures on income and product account, appears in the annual national income number of the *Survey of Current Business*. On some occasions attempts are made to project either or both of these measures on the basis of the budget estimates.

However, publicly available GNP-type forecasting is usually prepared outside the executive branch of the Federal Government, either by Congressional staffs or by private groups. Historical data for these series are contained in the "1954 National Income Supplement" and the national income numbers of the *Survey of Current Business*.

Compared to the indicators of the earlier stages of the government spending process, the various measures of government payments are readily available and, hence, widely used and analyzed. Although there undoubtedly are a number of refinements which would be helpful to the analyst, these measures have been used over a comparatively long period of time and as many of the "bugs" have been worked out and uses and limitations identified as reasonably could be expected. Accordingly, the present paper has focused on filling the major gaps in the measures of the government spending process, rather than on developing minor improvements in the expenditure series.

SUMMARY AND CONCLUSIONS

Series on the early stages of the Federal Government spending process—new obligational authority and obligations incurred—can be prepared from available operational statistics. Consideration should be given by the Federal agencies involved to preparing and publishing such series on a regular basis. Such budget information would be useful and complementary additions to the sections on government expenditures in such publications as the *Treasury Bulletin*, the *Economic Indicators*, the *Federal Reserve Bulletin*, and the *Survey of Current Business*.

ACCOUNTING PRINCIPLES AND CORPORATION STATUTES*

Robert T. Sprouse
Assistant Professor, University of California, Berkeley

In *Accounting Terminology Bulletin Number 1* (1953), the Committee on Terminology of the American Institute of Certified Public Accountants reiterated its 1949 recommendation that in the reporting of stockholders' equities "consideration should be given primarily to the *sources* from which the proprietary capital was derived."[1] This seems to be a straightforward statement of principle. Within the same paragraph, however, three transactions are cited for which legal reclassifications are to be given precedence over *sources*—namely, quasi-reorganizations, stock dividends, and transfers by resolution of the board of directors. In addition, the Committee has recommended that one major source, the contributed portion of proprietary capital, be subdivided along the lines of unique legal distinctions.[2] The effect of these recommendations seems to be in keeping with the 1941 report of the Committee wherein it was proposed that designations be adopted which "emphasize the distinctions between (1) legal capital, (2) capital in excess of legal capital, and (3) undivided profits."[3] It is clear, in any event, that in spite of the statement of principle that primary consideration be given to "sources" of proprietary capital, statutory provisions continue to influence to a considerable extent the analysis and reporting of transactions directly affecting stockholders' equities.

There is now evidence that generally accepted accounting practices have had some influence on recent statutes. Unfortunately, it is not necessarily true that such influence has stimulated progress. One noted writer in the field of corporation law has observed that " . . . the new corporation statutes are constantly pushing into new accounting areas."[4] One new statute relies upon determinations made "in accordance with generally accepted principles of sound accounting practice."[5] Another writer has commented that certain provisions of the new Model Business Corporation Act follow "modern accounting thought."[6] Such observations suggest that it is not only proper but obligatory that the accounting profession become more actively concerned with those aspects of corporation law which are directly related to financial transactions. Frequently, reasons for the prevailing dichotomy between what is proper procedure from a strictly legal point of view and what is proper procedure from an accounting point of view are not convincingly clear.

Ten states and the District of Columbia have thoroughly revised their corporation statutes since 1950. Of particular significance is that eight of these revisions have

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[1] American Institute of Certified Public Accountants (AICPA), Committee on Terminology, *Accounting Terminology Bulletins*, Number 1 (1953), p. 30.

[2] *Ibid.*

[3] AICPA, *Accounting Research Bulletins*, No. 12 (Special) (September 1941), p. 109.

[4] Elvin R. Latty, "Some Miscellaneous Novelties in the New Corporation Statutes," *Law and Contemporary Problems*, 23 (Spring 1958), 374.

[5] *North Carolina Business Corporation Act*, sec. 55–2(2) and 2(7).

[6] William P. Hackney, "The Financial Provisions of the Model Business Corporation Act," *Harvard Law Review*, 70 (June 1957), 1389.

been based largely on the Model Business Corporation Act prepared by the Committee on Corporate Laws of the American Bar Association.[7] The three other revisions have been enacted more or less independently.[8] This acceptance of the Model Act is markedly greater than that of the Uniform Business Corporation Act composed by the Commissioners on Uniform State Laws in 1928. During the latter's thirty years' life, only four states have adopted it.[9]

The first complete edition of the Model Business Corporation Act was published in 1950; it was revised in 1953 and has been supplemented in 1955 and 1957.[10] Where heretofore there have been few areas about which it has been safe to state generalizations with respect to the legal effects of transactions directly affecting stockholders' equity accounts, the rather substantial acceptance which the Model Act has already received at least suggests the possibility of reasonably uniform corporation statutes in this country in the future.

The following paragraphs constitute a critical analysis of some of the most important financial provisions of the Model Act and the recently enacted corporation statutes. Special attention is given to the identification and discussion of areas of agreement and disagreement between this recent law and current generally accepted accounting practices. Because this discussion is necessarily limited, it will embrace only terminology, and those provisions concerned with stock issues, cash dividends, and stock dividends.

Terminology

Early in the Model Act, three categories of stockholders' equity are defined in terms of how the amount of each is to be computed. These categories are designated as *stated capital*, *capital surplus*, and *earned surplus*. Subsequently, the distinctions among the three categories are made significant by assigning unique statutory restrictions to each. This terminology is used in each of the Model Act statutes except that of the District of Columbia which uses the term "paid in surplus" instead of capital surplus.[11] The Texas statute uses the Model Act terminology but has an additional category which is designated as "reduction surplus."[12] The three terms used in the Model Act are also used in the three recent non-Model Act statutes although the North Carolina statute refers to paid-in surplus as being a component of the more inclusive capital surplus category.[13]

In order to facilitate the definition of these three categories other terms have also been defined in the Model Act. The term "net assets" is defined as "the amount by which the total assets of a corporation, excluding treasury shares, exceed the total debts of the corporation."[14] Net assets, therefore, is synonymous with the accounting terms "stockholders' equity," "capital stock and surplus," and the numerous other terms used in accounting when referring to the excess of assets over liabilities.

In the Model Act, stated capital is defined operationally as "the sum of (1) par value of all shares of the corporation having a par value that have been issued, (2) the amount of the consideration received by the corporation for all shares of the

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[7] Wisconsin (1951), Oregon (1953), District of Columbia (1954), Texas (1955), Virginia (1956), North Dakota (1957), Alaska (1957), and Colorado (1958).

[8] Maryland (1951), North Carolina (1955), and Ohio (1955).

[9] Louisiana (1928), Idaho (1929), Washington (1932), and Kentucky (1946).

[10] American Bar Association, Committee on Corporate Laws, *Model Business Corporation Act* and 1957 Addendum thereto (hereafter referred to as *Model Act*), (Philadelphia; American Law Institute, 1957).

[11] *District of Columbia Business Corporation Act*, sec. 29-902(k).

[12] *Texas Business Corporation Act*, sec. 102 (14).

[13] *North Carolina*, sec. 55-49(e).

[14] *Model Act*, sec. 2(i).

corporation without par value that have been issued, except such part of the consideration therefor as may have been allocated to capital surplus in a manner permitted by law, and (3) such amounts not included in clauses (1) and (2) . . . as have been transferred to stated capital of the corporation, whether upon the issue of shares as a share dividend or otherwise, minus all reductions from such sum as have been effected in a manner permitted by law."[15] Accountants are apt to find that stated capital is the equivalent of the Capital Stock account or, where more than one class of stock has been issued, the total of the Preferred Stock and Common Stock accounts. Indeed, in many of the older state statutes, the term "capital stock" is used instead of the term "stated capital."

"Surplus" is defined as "the excess of the net assets of a corporation over its stated capital"[16] and it is further subdivided into "earned surplus" and "capital surplus." Earned surplus "means the portion of the surplus of a corporation equal to the balance of its net profits, income, gains and losses from the date of incorporation, or from the latest date when a deficit was eliminated by an application of its capital surplus or stated capital or otherwise, after deducting subsequent distributions to shareholders and transfers to stated capital and capital surplus to the extent such distributions and transfers are made out of earned surplus."[17] Capital surplus "means the entire surplus of a corporation other than its earned surplus."[18]

There can be no question about the synonymity of "earned surplus" as defined in the Model Act and "earned surplus" or "retained earnings" as used in accounting. The Model Act definition follows in every significant respect the definition of earned surplus contained in *Accounting Terminology Bulletin Number 1*,[19] a definition which was originally composed for the Institute in 1930 and which was included in *Accounting Research Bulletin No. 9 (Special)* published in May, 1941.[20] In fact, Mr. Ray Garrett, the Chairman of the Committee responsible for preparing the Model Act, has stated that the term "earned surplus" and its definition were adopted as a result of a conference with the Committee on Terminology of the Institute.

> It was recognized that the accounting profession was discarding the term "earned surplus" in favor of such terms as "retained income," "retained earnings," "accumulated earnings," or "earnings retained for use in the business." The American Bar Association Committee was of the view that "surplus" had come into disrepute among accountants because it had not been legally defined, that it could be defined by statute in an accounting sense, and that there was no substantial difference between surplus as defined in the Model Act and the substitute terms proposed by the accountants for their own use. The accountants' committee conceded that the term "earned surplus" was more appropriate in a statute; hence, its use in the Model Act.[21]

There are also indications that the practices of accountancy were considered in the selection and definition of the term "capital surplus." One can conjecture with some confidence that the accounting profession was not of much help on this point. The term has received a considerable amount of criticism from accountants and yet it is still widely used in accounting reports. Furthermore, although the Institute's Committee on Terminology condemns the term, it refers to "capital sur-

[15] *Ibid.*, sec. 2(j).
[16] *Ibid.*, sec. 2(k).
[17] *Ibid.*, sec. (1).
[18] *Ibid.*, sec. 2(m).
[19] AICPA, *Accounting Terminology Bulletins*, No. 1, p. 16.
[20] AICPA, *Accounting Research Bulletins*, No. 9, p. 75.
[21] Ray Garrett, "Capital and Surplus Under the New Corporation Statutes," *Law and Contemporary Problems*, XXIII (Spring 1958), 259.

plus" as "representing (a) capital contributed for shares in excess of their par or stated value" (which "includes such items as capital transferred from capital stock account as a result of the reduction of par or stated value, and credits resulting from transactions in the corporation's own stock"), "or (b) capital contributed other than for shares."[22] No preferred terminology has been recommended by the Committee.

The term "paid-in surplus" has been a popular designation for the capital surplus category of "net assets" in the older state statutes but the preference for "capital surplus" in the Model Act has been explained as follows: "Capital surplus is a more inclusive term than paid-in surplus, which implies that it is limited to part of the consideration received for issued shares. Also, *capital surplus seems to be more acceptable to the accounting profession* because it bears more resemblance to capital than earnings and profits and covers a variety of surplus terms previously in use."[23] This rationalization of the use of the term "capital surplus" is rather surprising since the frequent criticism of the term by accountants has generally centered on the antithetical nature of the terms "capital" and "surplus" and the tendency to use the term to aggregate a number of dissimilar components of stockholders' equity.

STOCK ISSUES

With one exception the conventional provisions regarding the issuance of par value stocks are continued in the new statutes. "The consideration received therefor shall constitute stated capital to the extent of the par value of such shares, and the excess, if any, of such consideration shall constitute capital surplus."[24] The exception is the Ohio statute under which the entire consideration for par value shares constitutes stated capital unless amounts in excess of par are designated capital surplus by positive action of the board of directors.[25]

The Model Act prohibits the sale of par value shares for less than par value[26] but Virginia and Maryland in their new statutes permit sale at less than par value.[27] It is to be noted, however, that in the two states where issuance of par value stock at less than par value is permitted, stated capital is increased by the amount of the consideration or the par value, whichever is less, and the shares are considered fully paid. That is, there is no contingent liability on the part of the purchasers for the difference between par and actual consideration received. The popular concept of "discount" on par value stock is, therefore, rendered obsolete. It is either prohibited, as in the Model Act, or meaningless, as in the Virginia and Maryland statutes.

In the first (1950) published version of the Model Act, there was a new twist introduced in the provisions dealing with the issuance of no par value shares. In keeping with tradition, no minimum consideration was imposed and the board of directors was permitted to designate a portion of the consideration for no par shares as capital surplus, but a curious limitation was placed on the amount which could be designated capital surplus. The Model Act provided that "within a period of sixty days after the issuance of any shares without par value, the board of directors may allocate to capital surplus not more than twenty-five per cent of consideration received for the issuance of such shares."[28]

[22] AICPA, *Accounting Terminology Bulletins*, No. 1, p. 29.
[23] Garrett, *op. cit.*, p. 260 (italics mine).
[24] *Model Act*, sec. 19.
[25] *Ohio General Corporation Law*, sec. 1701.30(B)(1).
[26] *Model Act*, sec. 17.
[27] *Maryland Article 23*, sec. 20(f).
Virginia Stock Corporation Act, sec. 13.1–17.
[28] *The Business Lawyer*, vol. VI (November 1950).

In the current (1957) version of the Model Act, the innovative "not more than twenty-five per cent" limitation has been eliminated and "any portion" may be allocated to capital surplus.[29] Meanwhile, however, Wisconsin, Oregon, Texas, North Dakota, Alaska and Colorado adopted the twenty-five per cent rule.[30] The District of Columbia and the three non-Model Act states did not impose any percentage limitation.[31] The Virginia statute provides that any portion of the consideration for no par shares may be allocated to capital surplus if the contract of subscription so provides, otherwise the twenty-five per cent rule applies.[32]

Under the twenty-five per cent limitation, the following rather striking situation might well arise:

Corporation A receives $100 per share for stock having a *par value of $5*. Ninety-five dollars per share "shall constitute capital surplus."

Corporation B receives $100 per share for stock having *no par value*. The maximum amount which the board of directors may allocate to capital surplus is $25.

If the percentage of the consideration received for par value shares that constitutes capital surplus is important, why should it be considered necessary to limit the portion of consideration which may be designated as capital surplus in the case of no par value shares?

There is an additional factor to be considered where the no par shares have a liquidation preference. In accordance with the Model Act, only the consideration received for no par shares in excess of any involuntary liquidation preference may be allocated to capital surplus.[33] All the Model Act states, Maryland, and Ohio have adopted this or a very similar rule. Only the North Carolina statute ignores the liquidation preferences on no par value shares. Texas is unique in that its statute refers to voluntary rather than involuntary liquidation preferences,[34] and the District of Columbia is unique in requiring that where no par value shares have an involuntary liquidation preference, stated capital must be increased by the amount of that preference.[35]

The District of Columbia provision, together with the provision that no par value shares may be issued for any consideration deemed appropriate by the board of directors, would seem to make possible something new: a discount on no par value stock. For example, if a District of Columbia corporation receives $2,000 for 100 shares of no par value stock having an involuntary liquidation preference of $25 per share, stated capital must be increased $2,500 even though net assets have increased only $2,000. If such a corporation has no surplus to "absorb" the difference, a $500 "discount on stock" would apparently exist and require disclosure.

In general, the significance attached to the liquidation preferences of no par value shares is inconsistent and rather difficult to assess:

Case 1

Corporation A receives $110 per share for stock having a *par value of $5* and an involuntary liquidation preference of $110. *One hundred five dollars shall constitute capital surplus.*

Corporation B receives $110 per share for *no par value* stock having an involuntary liquidation preference of $110. *None of the consideration received may be allocated to capital surplus.*

Query: In what way is the liquidation preference of no par value stock more significant than the liquidation preference of par value stock?

[29] 1957 Addendum to *Model Act*, p. 3.

[30] *Alaska Business Corporation Act*, sec. 36-2A-27. *North Dakota Business Corporation Act*, sec. 10-1918. *Oregon Business Corporation Act*, sec. 57.111(2). *Texas Business Corporation Act*, sec. 2.17(b). *Wisconsin Business Corporation Law*, sec. 180.16(2). *Colorado Corporation Act*, sec. 20.

[31] *District of Columbia*, sec. 29-908e; *Maryland*, sec. 24(b); *Ohio*, sec. 1701.30(B)(1); *North Carolina*, sec. 47(b)(2).

[32] *Virginia*, sec. 13.1-18.

[33] *Model Act*, sec. 19.

[34] *Texas*, sec. 2.17(B).

[35] *District of Columbia*, sec. 29-908e.

Case 2

Corporation A has some authorized but unissued *$100 par value* stock having a liquidation preference of $110. *This stock may not be issued for a consideration less than $100 per share.*

Corporation B has some authorized but unissued *no par value* stock having a liquidation preference of $110. *This stock may be issued for as little as $1 per share.*

Query: Is it rational to attach importance to the liquidation preference of no par value stock only (as in Case 1) but then only if the consideration received is in excess of the liquidation preference?

The rationale of this obvious inconsistency is not at all clear. Perhaps the real mystery, however, is the need in the law, and even more especially in the accountants' balance sheet, for any division of the proceeds from stock issues, par or no par, into stated capital and capital surplus. It will surely be conceded that from an economic viewpoint any subdivision of the original stockholders' investment contribution between par and excess of par or between stated value and excess of stated value is utterly spurious. This statement has been made by so many accountants so many times that it has now become trite. It must be concluded that the accounting profession has continued to observe this distinction only in order to disclose legal information to some extent. Now it appears quite possible that the legal profession has perpetuated the distinction in an effort to align modern statutory law and modern accounting practice.

It is noteworthy that in the case of a few older statutes the entire consideration received for no par stock represents an increase in stated capital,[36] and that in most states, including those recently adopting the Model Act, the entire consideration received for no par stock constitutes an increase in stated capital *unless* the board of directors takes positive action and elects to exercise the option of designating some portion as capital surplus. The fact that this designation is made optional seems to offer support to the view that the distinction is not only spurious but unnecessary.

Cash dividends

The key provision of the Model Act relating to the declaration and payment of dividends in cash or property is commendably simple and straight-forward. This basic rule is that the board of directors may declare such dividends "only out of the unreserved and unrestricted earned surplus."[37] It should be understood that the phrase "out of" is used rather loosely and extensively in corporate statutes. Translated, the provision means that the amount of unreserved and unrestricted earned surplus represents the maximum *amount* of cash and property that can be distributed and further that unreserved and unrestricted earned surplus is reduced by the *amount* declared. The "unreserved" qualification arises from provisions elsewhere in the Act which explicitly grant to the board of directors the power "to create a reserve or reserves out of its earned surplus for any proper purpose or purposes, and . . . abolish any such reserve in the same manner."[38] Other provisions may cause capital surplus and earned surplus to be "restricted" as in the case of certain treasury stock transactions.

"The board of directors of a corporation may also, from time to time, distribute to the holders of its outstanding shares having a cumulative preferential right to receive dividends, in discharge of their cumulative dividend rights, dividends payable in cash out of the capital surplus of the corporation, if at the time the corporation has no earned surplus. . . . Each such distribution, when made, shall be

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[36] Connecticut, Florida, Indiana, Iowa, Montana, New Mexico, South Dakota, and Vermont.
[37] *Model Act*, sec. 40(a).
[38] *Ibid.*, sec. 64.

identified as a payment of cumulative dividends out of capital surplus."[39]

One overriding general provision prohibits the declaration and payment of any dividends when the corporation is insolvent or when the payment of the dividend would render the corporation insolvent. "Insolvent" is defined in the Act as the "inability of a corporation to pay its debts as they become due in the usual course of its business."[40] There are also special provisions relevant to corporations "engaged in the business of exploiting natural resources" which will not be considered here.[41]

It is of particular interest that even among the states which have basically adopted the Model Act not all have subscribed to the Act's restrictions upon cash dividends. Wisconsin, Oregon, Texas, North Dakota, and Alaska have adopted essentially the same dividend provisions as specified in the Model Act. Colorado, the District of Columbia, and Virginia, which have followed the Model Act for the most part, and the three non-Model Act states, Maryland, North Carolina, and Ohio, have provided for cash dividends to be declared under somewhat less restrictive circumstances.

In addition to allowing dividends out of unrestricted and unreserved earned surplus, the Colorado statute allows dividends out of the excess of net assets over stated capital, i.e., any surplus, as long as voluntary liquidation preferences are not impaired.[42] The Colorado statute also includes the Model Act provision for cumulative preferred dividends out of capital surplus in the absence of earned surplus in spite of impairment of liquidation preferences.

The District of Columbia statute (which uses the term "paid-in surplus" rather than capital surplus) limits declarations out of paid-in surplus to dividends on preferred stock but does not require the absence of earned surplus.[43]

Virginia and Ohio represent the least restrictive extreme. The Virginia statute permits cash dividends to be declared "out of unreserved and unrestricted earned surplus of the corporation or out of capital surplus, however arising," and requires only that the recipient be notified whenever the source of the dividend is the latter.[44] In Ohio too, cash dividends may be declared out of any surplus provided when any portion of a dividend is paid out of capital surplus the recipient be notified of that fact.[45] The requirement of disclosure of source is present in each of the statutes permitting cash dividends out of capital surplus.

The Maryland statute permits cash dividends on any class of stock to be declared out of capital surplus but specifies that capital surplus paid in by one class of shares cannot be used to pay a dividend on a junior class.[46] In effect, then, capital surplus arising from the issuance of preferred stock cannot be "used" for dividends on common stock but capital surplus arising from the issuance of common stock can be "used" for dividends on either common or preferred stock.

North Carolina is the only state whose new statute permits dividends out of "profits earned during the current or preceding accounting period, each said period to be not less than six months or more than one year in duration, regardless of any impairment of stated capital."[47] North Carolina dividends may be paid out of capital surplus only on preferred stock and then only if there is neither earned surplus nor current profits.[48] The results of the North Carolina provisions are a set of

[39] *Ibid.*, sec. 41.
[40] *Ibid.*, sec. 2(n).
[41] *Ibid.*, sec. 40(b).
[42] *Colorado*, sec. 42(d).
[43] *District of Columbia*, sec. 29-917.
[44] *Virginia*, sec. 13.1-43(a).
[45] *Ohio*, sec. 1701.33(A) and (F).
[46] *Maryland*, sec. 37(a)(3).
[47] *North Carolina*, sec. 55-50(a)(2).
[48] *Ibid.*, sec. 55-50(a)(3).

priorities: dividends may be declared on any class of stock out of earned surplus; in the absence of earned surplus or even in the face of a deficit, dividends may be declared on any class of stock out of "current profits"; if there is no earned surplus and no current profit, dividends may still be declared out of capital surplus but, in this case, only on preferred stock.

The nature of North Carolina capital surplus is also unique. In addition to paid-in surplus and surplus arising from the reduction of stated capital, it includes surplus created by the "revaluation of assets made in good faith upon demonstrably adequate bases of revaluation."[49] This means that, in the absence of earned surplus and current profits, dividends could be paid to preferred stockholders out of appraisal surplus.

On the other hand, North Carolina has an additional general limiting provision. No cash dividends may be declared on junior shares which would reduce net assets below the "highest aggregate liquidation preferences" of preferred shares.[50] It is possible, therefore, that cash dividends on common stock would be prohibited even though there was earned surplus.

It appears that the rather clearly defined restrictions upon cash dividends specified in the Model Act (out of unreserved and unrestricted earned surplus and, in the absence of earned surplus, out of capital surplus in payment of cumulative preferred dividends only) are clouded by separate provisions permitting "distributions in partial liquidation." If a cash distribution is identified as a "distribution in partial liquidation," as in contrast to a "dividend," it may be made out of stated capital or capital surplus.[51] A distribution in partial liquidation can be made only if "the articles of incorporation so provide or such distribution is authorized by the affirmative vote of the holders of at least two-thirds of the outstanding shares of each class" but it seems reasonable to expect that in drawing up articles of incorporation, advantage will be taken of those provisions giving boards of directors broad powers.

In addition to the solvency requirement, the board of directors may make distributions in cash or property "in partial liquidation" only if there are no preferred dividends in arrears and the distribution will not reduce net assets below "the aggregate preferential amount payable in event of voluntary liquidation."[52] There is no requirement, however, which would prevent such distributions where an earned surplus exists. Again, even among the Model Act states, minor individual variations of these provisions have been introduced.

Stock dividends and stock split-ups

In accordance with the Model Act, "dividends may be declared and paid in . . . authorized but unissued shares out of any unreserved and unrestricted surplus."[53] Where the stock dividend consists of par value shares, "there shall be transferred to stated capital . . . an amount of surplus at least equal to the aggregate par value of the shares to be issued as a dividend."[54] Where the stock dividend consists of no par value shares, "there shall be transferred to stated capital . . . an amount of surplus equal to the aggregate stated value" fixed by the board of directors at the time the dividend is declared.[55] Stock dividends may also be declared "out of any treasury shares that have been reacquired out of surplus."[56]

The foregoing provisions apply to "ordinary" stock dividends only. The Model Act restricts the distribution of one class

[49] *Ibid.*, sec. 55–49(e).
[50] *Ibid.*, sec. 55–50(c)(3).
[51] *Model Act*, sec. 41.
[52] *Ibid.*, sec. 41(d).
[53] *Ibid.*, sec. 40(d).
[54] *Ibid.*, sec. 40(d)(1).
[55] *Ibid.*, sec. 40(d)(2).
[56] *Ibid.*, sec. 40(c).

of shares to the holders of another class[57] and clearly distinguishes between a stock dividend and a stock split-up. "A split-up or division of the issued shares of any class into a greater number of shares of the same class *without increasing the stated capital* of the corporation shall not be construed to be a share dividend. . . ."[58]

Although not necessarily in conflict with the American Institute of Certified Public Accountants' distinction between a split-up and dividend, the statutory distinction is based on different grounds. The Institute's distinction is based primarily on the purpose of the issue. The issuance of shares without consideration intended merely to give the recipients evidence of their share of the corporation's earnings which the board of directors has determined shall be permanently retained in the business is considered to constitute a stock dividend; the issuance of shares without consideration intended to reduce the market value per share in order to obtain wider distribution and improved marketability of the shares is considered to constitute a stock split-up.[59] The statutory distinction depends primarily upon whether or not there is an accompanying "capitalization" of surplus.

It is interesting to note that, like cash dividends, stock dividends may not be declared "when the corporation is insolvent or when the payment thereof would render the corporation insolvent."[60] The conditions under which a stock dividend might render a corporation insolvent are inconceivable and it is not altogether apparent in what way an ordinary stock dividend might encroach upon the rights of creditors or the senior stockholders of a corporation which was insolvent at the time of declaration. Perhaps it was merely expedient to place identical restrictions upon cash dividends and stock dividends.

One can detect in the Model Act a recognition of the current accounting practice of relating stock dividends to their estimated "fair value." One indication is revealed when the 1950 version is compared with the 1957 version. Originally the Act required the transfer of the aggregate par value of the dividend to stated capital; the current version has been amended to require the transfer of *at least* the aggregate par value. Also, there is contained in the Act a provision which permits all or part of earned surplus to be transferred to *capital surplus* by resolution of the board of directors.[61] Such a provision was literally unknown in earlier statutes. However, if it is the desire of the board of directors to follow accounting practice and transfer the par value of a stock dividend to *stated capital* and the excess of fair value over par to *capital surplus*, the board of directors will have to state their stock dividend resolution with caution. The dividend section of the Act provides that at least par be transferred to *stated capital*. The provision dealing with the transfers of amounts from earned surplus to *capital surplus* is in an entirely separate section of the Act, one not concerned with stock dividends.

The Oregon adaptation of the Model Act quite clearly recognizes the accounting method. With respect to par value stock dividends, "if such shares are issued at more than par value there shall be transferred from earned surplus to capital surplus an amount equal to the value, exceeding par value, for which such shares are issued."[62] Strangely enough, there is no similar provision concerning no par value shares. Under the Maryland statute, in the case of stock dividends consisting of either par or no par values, "there may be trans-

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[57] *Ibid.*, sec. 40(e).
[58] *Ibid.*, sec. 40 (italics mine).
[59] AICPA, *Accounting Research Bulletins*, No. 43, p. 49.
[60] *Model Act*, sec. 40.
[61] *Ibid.*, sec. 64.
[62] *Oregon*, sec. 57.216(4)(a).

ferred from earned surplus to capital surplus such additional amount as the board of directors may determine."[63]

North Carolina dividends in no par value shares are required to be capitalized at their "fair value" and transfers from earned surplus to capital surplus without stockholder approval are permitted when incidental to a share dividend but prohibited otherwise.[64]

It must be said that a transfer of earned surplus to capital surplus in connection with a stock dividend does not entirely make sense from a legal point of view. Since stock dividends may be declared out of capital surplus with equal facility, the legality of future stock dividends is in no way diminished by the transfer. It is true, of course, that under the Model Act future cash dividends are effectively restricted by such a transfer.

Of the new statutes, those of the District of Columbia and Texas are the only ones not containing express provisions permitting transfers from earned surplus to capital surplus to be effected in some fashion. The District of Columbia statute is also unique in allowing stock dividends to be declared out of paid-in surplus only on preferred stock.[65] In Maryland, capital surplus which was contributed by preferred stockholders cannot be used for stock dividends on junior shares.[66] Perhaps the District of Columbia and Maryland provisions are also matters of consistency rather than matters of logic.

Ohio has the only new statute expressly providing for stock dividends to be declared out of unrealized appreciation[67] although, as was mentioned earlier, North Carolina capital surplus includes appraisal surplus. The District of Columbia statute is the only one which does not restrict the distributions of dividends of one class of shares to holders of another class. With these few exceptions, the statutes recently enacted by individual states are in agreement with the provisions of the Model Act with respect to stock dividends.

The Model Act contains a rather interesting innovation, referred to earlier, which permits treasury shares that have been reacquired "out of" surplus to be distributed as stock dividends.[68] Although this is a stock dividend which legally has no effect on stated capital and no effect on total surplus other than removing the "restriction" imposed upon surplus at the time of purchase,[69] this transaction is apt to satisfy the definition of stock dividend used by the Institute's Committee on Accounting Procedure. Does *Accounting Research Bulletin No. 43* require a transfer "from earned surplus to the category of permanent capitalization . . . an amount equal to the fair value of the additional shares issued"[70] when the shares distributed as a "dividend" are treasury shares?

It would be a simple matter to reduce retained earnings by the cost of the treasury shares, presumably their fair value at the date of acquisition, and allow stated capital to remain unaffected, but this does not constitute a transfer of fair value to permanent (?) capitalization. Shall earned surplus be reduced again when the treasury shares are issued as "dividends"? And, if the treasury shares are held for a period of time sufficient for the current fair value to be significantly different from cost, how shall the transaction be analyzed? These problems arise as a result of classifying treasury shares as something distinct from other shares which are not outstanding and which never have been.

From the legal viewpoint the analysis is simple. Surplus has already been reduced

[63] *Maryland*, sec. 37(a)(4) and (5).
[64] *North Carolina*, sec. 55–51(a)(2) and sec. 55–49(h).
[65] *District of Columbia*, sec. 29–917(b).
[66] *Maryland*, sec. 37(a)(3).
[67] *Ohio*, sec. 1701.33(A).
[68] *Model Act*, sec. 40(d).
[69] *Ibid.*, sec. 5.
[70] AICPA, *Accounting Research Bulletin No. 43*, p. 51.

at the time of acquisition by the cost of the treasury shares. Distribution of the treasury shares as a dividend does not change the amount of stated capital or any surplus. Because stated capital is not increased upon the gratuitous distribution of treasury shares, this seems to be the sort of transaction that, under the Model Act, is deemed to be a split-up and which the Model Act specifies "shall not be construed to be a share dividend." That restriction on the use of the term "stock dividend," however, refers to "a split-up or division of the issued shares . . . into a greater number of shares."[71] Treasury shares are considered to be *issued* (but not outstanding) shares[72] and therefore their distribution does not constitute an increase in the number of *issued* shares. Technically, therefore, there is no inconsistency in referring to the gratuitous distribution of treasury shares as a share dividend for the restriction on the use of the term "share dividend" is not applicable.

It is to be noted that eight of the new statutes have followed the Model Act in this respect. The District of Columbia and Maryland have no explicit provision permitting treasury shares to be issued as stock dividends and North Carolina provides for the distribution of treasury shares to stockholders but specifies that such distribution shall not be represented to be a share dividend.[73]

SUMMARY

Each of the eleven new statutes uses the terms "stated capital" and "earned surplus"; ten use the term "capital surplus" but the District of Columbia statute uses "paid-in surplus."

Nine of the new statutes prohibit the sale of par value shares for less than par. Virginia and Maryland permit sale at less than par but without any contingent "discount liability."

Although none of the eleven statutes requires a minimum consideration for no par value shares, ten statutes permit only that consideration received for no par value shares in excess of liquidation preferences be designated as capital surplus and six of these have an additional limitation that not more than 25 per cent of the consideration for no par value shares may be designated as capital surplus. One, the North Carolina statute, does not refer to liquidation preferences in connection with designations of capital surplus. Four statutes have not adopted the 25 per cent rule and Virginia has made it optional.

All the statutes permit cash dividends on any class of stock to be declared "out of" earned surplus. All the statutes permit cash dividends on preferred stock to be declared "out of" capital surplus, some of these only under certain conditions, e.g., in the absence of earned surplus (six statutes). Four statutes permit cash dividends on common stock to be declared "out of" capital surplus, but two of these have conditions attached to the privilege. Only the North Carolina statute permits dividends to be declared "out of" current earnings in the absence of earned surplus.

Each of the new statutes permits stock dividends to be declared "out of" either earned or capital surplus; two statutes permit stock dividends "out of" unrealized appreciation; nine statutes permit treasury shares to be issued as stock dividends although one of these, North Carolina, does not permit them to be called stock dividends.

Nine of the statutes have provisions permitting the transfer of earned surplus to capital surplus. Of these, one permits such a transfer only in connection with a stock dividend. These provisions seem to facilitate the capitalization of stock divi-

[71] *Model Act*, sec. 40 (italics mine).
[72] *Ibid.*, sec. 2(h).
[73] *North Carolina*, sec. 55–51(d).

dends at fair value although only three refer to such transfers within the stock dividend provisions and the one statute which requires capitalization at fair value does so only for no par value shares.

The provisions of recently enacted corporation statutes which have relevance to the practices of accountancy have not been exhausted in this discussion. There are other provisions dealing with treasury shares,[74] the reduction of stated capital, the conversion of securities, the declaration of dividends by corporations engaged in the exploitation of natural resources, and the consolidation and merger of corporations, which clearly have accounting implications. Those dealt with here were chosen because of their obvious significance in terms of the frequency with which related transactions occur.

CONCLUSIONS

From an accountant's point of view, perhaps the outstanding feature of the recent statutes is the comprehensive treatment of the legal effects of financial transactions. It is recognized, of course, that even comprehensive statutes may ultimately require interpretation by the courts but heretofore, in many states, corporation law has been largely determined by court decision rather than by legislative action. Unfortunately, critical examination of the eleven recent corporation statutes reveals ambiguities, inconsistencies, and distinctions for which there is no apparent justification from either the legal or economic viewpoint. A few of these have been indicated in the preceding discussion.

It is clear that accounting practice has received recognition, though incomplete, in the definition of terms and in those provisions dealing with the capitalization of stock dividends. This would lead one to believe that generally accepted accounting practices in other areas might well earn legal recognition. The accounting profession has devoted considerable attention to the improvement of legislation related to federal income taxation, and rightly so for this is a matter which deeply concerns it. On the same grounds, the activity of this decade in enacting more modern and comprehensive corporation statutes merits our professional interest—far more than it has received.

[74] Accounting for treasury stock transactions under the new statutes is discussed in Robert T. Sprouse, "Accounting for Treasury Stock Transactions: Prevailing Practices and New Statutory Provisions," *Columbia Law Review*, 59 (June, 1959), 882–900, and E. George Rudolph, "Accounting for Treasury Shares under the Model Business Corporation Act," *Harvard Law Review*, 73 (December, 1959), 323–331.

THE NATURE OF CORPORATE RESIDUAL EQUITY UNDER THE ENTITY CONCEPT

David H. Li

Assistant Professor, University of Southern California

One of the basic concepts in corporation accounting concerns the nature of the corporation. The analysis and reporting of business events affecting the corporation and/or its participants are governed, in a significant way, by the viewpoint taken. The two most widely held views are that of the *proprietary concept*, conceiving the corporation as an association of entrepreneurs,[1] and the *entity concept*, holding the corporation as an institution separate and distinct from the parties who furnish funds.[2] Both of these, along with other views, find support in legal writings and court decisions.[3]

As a means of testing the internal consistency of each of the two views, the treatment of interest, income taxes, and dividends—three of the most persistent problems in corporation accounting—under each view is often posed.[4] It seems that both views are found to be inadequate and inconsistent in some respects, insofar as the treatment of these problems is concerned.[4,5] Though new proposals have been advanced,[6] they were made outside the context of the two views.

Inconsistencies as they relate to the entity concept stem, it seems to the writer, mainly from a misunderstanding of the nature of corporate residual equity. A reconsideration of its nature under the entity concept is the purpose of this paper. To provide a framework under which this may be done, the objectives and behavior of the corporation are first hypothesized.

THE OBJECTIVES AND BEHAVIOR OF THE CORPORATION UNDER THE ENTITY CONCEPT

The nature of the corporation under the entity concept has been given the classic definition as an "institution in its own right."[7] The following hypotheses, relative to the objectives and behavior of the corporation under the entity concept, are advanced in the light of this definition.

1. The primary objective of the corporation at the time of its inception is to render services, to create utilities. This is comparable to the statement made by Paton and Littleton that the enterprise is "an economic entity and a center of managerial activity."[8] It is also compatible with the central theme of the enterprise theory that "the primary concern of management groups is to maintain the *flow* of production,"[9] and with that of the activity concept that "a business organization is a

[1] Husband, George R., "The Entity Concept in Accounting," The Accounting Review, October, 1954, pp. 552–563.

[2] Paton, W. A., and Littleton, A. C., *An Introduction to Corporate Accounting Standards* (Chicago: American Accounting Association, 1940), p. 8.

[3] Sprouse, Robert T., "Legal Concepts of the Corporation," The Accounting Review, January, 1958, pp. 37–49.

[4] Sprouse, Robert T., "The Significance of the Concept of the Corporation in Accounting Analysis," The Accounting Review, July, 1957, pp. 369–378.

[5] Staubus, George J., "Payment for the Use of Capital and the Matching Process," The Accounting Review, January, 1952, pp. 104–113; Hendriksen, Eldon S., "The Treatment of Income Taxes by the 1957 AAA Statements," The Accounting Review, April, 1958, pp. 216–221; Horngren, Charles T., "Stock Dividends and the Entity Theory," The Accounting Review, July, 1957, pp. 379–385; Husband, George R., "The Corporate-Entity Fiction and Accounting Theory," The Accounting Review, September, 1938, pp. 241–253.

[6] For example, the *enterprise theory*, see Suojanen, Waino W., "Accounting Theory and the Large Corporation," The Accounting Review, July, 1954, pp. 391–398; the *activity concept*, see Nammer, Helmi Mahmoud, "An Activity Concept of the Business Enterprise and Its Implications in Accounting Theory," The Accounting Review, October, 1959, pp. 622–623; and the *residual equity concept*, see Staubus, George J., "The Residual Equity Point of View in Accounting," The Accounting Review, January, 1959, pp. 3–13.

[7] Paton and Littleton, *op. cit.*, p. 8.

[8] *Ibid.*, p. 43.

[9] Soujanen, *op. cit.*, p. 392, quoting Knauth, Oswald W., "Group Interest and Managerial Enterprise," *The Journal of Industrial Economics*, April, 1953.

complex system of formal and informal coordinated activities for the purpose of creation or transformation and distribution of utilities.'"[10]

2. The corporation, in implementing this objective, moves to secure business capital. The initiative to do this is taken by the corporation, and not by capital-supplying parties. Legal requirements necessary to the formation of a corporation are considered to be a mere formality.[11]

3. The corporation, as an institution in its own right, holds itself out as a competent party to contract with capital-supplying parties in the process of securing capital. Capital thus secured suggests that these parties are in sympathy with the corporation's objective and that the corporation agrees to be responsible to these parties according to their contracts.

4. The main objective of the corporation after its inception is to survive. This statement is similar to the assumption of business continuity as discussed by Paton and Littleton;[12] the difference is mainly in viewpoint and in emphasis. It is here viewed as an *objective* to be actively pursued, and not merely as an *expectation* to be passively substantiated.

5. The corporation, in implementing this objective, strives to attain and maintain both economic and financial competence. Striving for economic competence suggests the efficient rendering of services; striving for financial competence, the maintenance of an atmosphere conducive to attracting additional business capital. It is to be noted that survival in an expanding economy necessitates growth, which in turn necessitates additional capital.

CLAIMS AGAINST THE CORPORATION VS. CLAIMS AGAINST CORPORATE ASSETS

In contracting with capital-supplying parties, the corporation holds itself out as a competent party to contract and agrees to be responsible to these parties according to their contracts. Stated differently and viewed from the capital-suppliers' standpoint, the imparting of capital results in a claim, a legal right against the *corporation* according to contracts. This view is somewhat different from that expressed by Paton and Littleton that "those who contributed capital have a claim against the *assets* according to their contracts."[13]

The difference, it seems, is in timing. Presentment of claim for payment, drawing an analogy from the law of negotiable instruments, must first be made against the primary party on the due date of the claim.[14] The corporation, as a party competent to contract, is the primary party to whom presentment must be made. Only when an effective claim against the corporation is unsatisfied do capital-supplying parties have a claim against the *assets*, and then only when it is permitted by law.[15,16] A claim against assets, in other words, cannot become operational unless the corporation has first failed to discharge its

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[10] Nammer, *op. cit.*, p. 622.

[11] This may best be illustrated by a recent case of stock offering. A new corporation is to be formed to take over the assets of an existing corporation. To finance this transaction, it intends to offer 2,900,000 shares of stock at $25 per share. In order to meet one of the legal requirements of incorporation, a group of underwriters subscribed to and paid for 100 shares of the capital stock of this newly formed corporation, at $10 per share. In the meantime, the underwriters and the corporation entered into an agreement such that the 100 shares of stock subscribed to and paid for by the underwriters will be purchased by the corporation at cost and reoffered by the latter at $25 per share. *The Prospectus of Universal Oil Processes, Inc.* (February 4, 1959), p. 3.

[12] Paton and Littleton, *op. cit.*, pp. 9–11.

[13] *Ibid.*, p. 8; emphasis supplied.

[14] Dillavou, Essel R., and Howard, Charles G., *Principles of Business Law* (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1957), pp. 419–422.

[15] Compare this statement: "The corporation stands in the same position as a natural person, with respect to creditors. A suit may be brought against it, and upon judgment being obtained, an execution may be levied against its property, which may then be sold." *Ibid.*, p. 638.

[16] It seems that an individual bondholder may not be granted this relief by the court when the corporation is still a going concern; see *New Orleans Pac. Ry. Co. v. Parker*, 143 US 42 (1891); *Seibert v. Minneapolis & St. L. Ry. Co.*, 53 NW 1134 (1893); both reprinted in Berle, Adolf A., Jr., *Cases and Material in the Law of Corporation Finance* (St. Paul: West Publishing Company, 1930), pp. 562–566.

responsibilities. This condition, however, is inconsistent with maintaining an attractive investment atmosphere, the latter implying and necessitating the discharge of existing financial responsibilities promptly and fully.

The statement made by Paton and Littleton, in other words, is applicable only to instances where the corporation contemplates or is forced into liquidation—where the entity shield is pierced and where the business-continuity assumption is no longer valid. Under the entity concept with its implicit business-continuity assumption, capital-supplying parties have claims against the corporation according to their contracts.

STOCKHOLDERS' RIGHTS AGAINST THE CORPORATION

In consideration of capital supplied by stockholders, the corporation yields certain rights in return. Such rights are generally specified in prospectuses of stock offerings, in a manner somewhat similar to the following example:

> The Certificate of Incorporation denies preemptive rights, and contains no provisions with respect to redemption or sinking fund. Holders [of capital stock] have one vote per share and are entitled to share equally in dividends paid and in the net assets on liquidation.[17]

That the stockholders are granted the right to share corporate assets on liquidation follows the liquidation viewpoint after the entity shield is pierced. For the purpose of discussing stockholders' rights against the corporation under the entity concept and its implicit business-continuity assumption, this right is irrelevant and need not be further discussed.[18]

The right to vote, in the opinion of this writer, merely accords a "deterrent power" to stockholders. This power is generally used *in earnest* only when the corporation has failed to discharge its responsibilities.[19] So long as the corporation properly discharges its responsibilities to stockholders, it is commonly not exercised.[20] The right to vote, in other words, serves merely as a reminder to the corporation of its responsibilities to stockholders; this is consistent with one of the corporation's objectives. For this reason, this right is here considered as insignificant and redundant.

The stockholders are, then, left with only one right, the right to receive dividends when and if they have been declared. Even this right is conditional.

THE NATURE OF CAPITAL SUPPLIED BY STOCKHOLDERS

From the above analysis, it seems that the only significant representation made by the corporation in offering to contract with stockholders is to agree to pay dividends when and if declared. The acceptance of this offer, together with the payment of the offering price to the corporation, permits stockholders to gain this right, the right to receive future dividends. Conversely, the offering price so paid constitutes consideration to the

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[17] *The Prospectus of Universal Oil Processes, Inc.*, p. 23.

[18] Paton and Paton, in discussing the rights of stockholders, did not mention their right to share pro rata in the remaining assets of the corporation in the event of liquidation, presumably for the same reason as given here. Paton, William A., and Paton, William A., Jr., *Corporate Accounts and Statements* (New York: The Macmillan Company, 1955), pp. 14–15. Similarly, Dillavou and Howard listed three rights of stockholders, the right to inspect books, the right to attend meetings and to vote, and the right to share in profits and dividends. Dillavou and Howard, *op. cit.*, pp. 600–601.

[19] Compare the following statement: "David McCord Wright, . . . economist, was asked by the president of a large corporation what to do about indifferent stockholders. 'Just don't declare dividends for a few years,' said Wright. 'You'll have plenty of interest then.' " Livingston, J. A., *The American Stockholder* (Philadelphia: J. B. Lippincott Company, 1958), p. 39.

[20] "Indifference [of stockholders] to the exercise of voting rights by the return of proxies is so great that during the month of April, 1937, fifteen companies having securities listed on the New York Stock Exchange were forced, owing to the lack of a legal quorum, to adjourn their stockholders' meetings." Hurff, George B., *Social Aspects of Enterprise in the Large Corporation* (Philadelphia: University of Pennsylvania Press, 1950), p. 74.

corporation in support of granting such a right. A stock issue, it seems to the writer, is in effect a variable annuity contract with a perpetual life and transferable rights, its principal represented by the offering price and annuity payments by dividends.

Following this line of reasoning, it seems logical to conclude that business capital supplied by stockholders to the corporation does not represent the equity of the former, but rather that of the latter. Several observations tend to support this conclusion.

In the first place, capital supplied by stockholders will not be returned to them, unless at the corporation's option, so long as the corporation remains a going concern. There is no due date, "no provision with respect to redemption or sinking fund." Since without a due date a claim cannot be presented, there is, indeed, no claim. As Mr. Justice Reed observed, "A stockholder has no present interest in the physical property of an unliquidated corporation."[21]

That the lack of a due date denies a claim may also be approached from the present-value concept. The present value of a claim due at infinity is zero, the same as if there were no claim at all.[22] The fact that stockholders have a right to remaining assets on liquidation is not inconsistent with the view expressed here; liquidation may be said to be an event operating to accelerate the due date from infinity to determinate, hence from a zero claim to a valuable claim.

The fact that the corporation has the right to designate a portion of capital supplied by stockholders as "Additional Paid-In Capital" further strengthens the conclusion reached here. Only when capital supplied by stockholders is considered to be the equity of the corporation would the corporation gain the right to make such a designation.

THE STOCKHOLDERS' WILLINGNESS TO SUPPLY CAPITAL

If the writer's thesis that capital supplied by stockholders becomes the equity of the corporation is accepted, what is its effect upon the stockholders' willingness to supply capital to the corporation?

Though stockholders do not have a right to the corpus once it is transferred to the corporation, as contended here, they do have, as Berle put it, "a modified right to receive a portion of the profits, usually in the form of money, and a highly enhanced right to sell [their] participation for cash."[23] The right to sell—to be compensated at a gain or a loss by *parties other than the corporation*—cushions the stockholders' willingness to supply capital to the corporation.

Note that a stock transaction, following the writer's contention, is not a transfer of the right to the corpus, but rather a transfer of the right to receive future dividends. Stock price, in other words, is not a reflection of the "book value" of a stock, but a capitalization of *future* dividends.[24] This is generally the manner in which stock prices are established at the market place; this also supplies a reason to account for the fact that a corporation paying higher dividends, other things being equal, tends to command a higher market price for its stock.

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[21] *Kaufman v. Societe Internationale*, 343 US 156, 166 (1952), quoted and discussed at length in Berger, Rauol, " 'Disregarding the Corporate Entity' for Stockholders' Benefit," *Columbia Law Review*, June, 1955, pp. 808–829. Berger reached the conclusion that the above-quoted statement cannot be refuted but expressed the hope that some relief be granted stockholders if the corporation is incapacitated.

[22] For a discussion on the treatment of bond liabilities using the present-value concept, see Anton, Hector R., "Accounting for Bond Liabilities," *The Journal of Accountancy*, September, 1956, pp. 53–56.

[23] Berle, Adolf A., Jr., *The 20th Century Capitalist Revolution* (New York: Harcourt, Brace and Company, 1954), p. 30.

[24] High earnings suggest that a corporation is able (but not necessarily willing) to pay high dividends in the future; they are a factor in estimating the future dividend prospect.

If the right to sell is coupled with an organized market in which to sell, the willingness of stockholders to supply capital to the corporation is further enhanced.[25] A market permits stockholders to transfer their rights more readily in the event they are no longer in sympathy with the corporation's objective.

DISCHARGING THE CORPORATION'S RESPONSIBILITIES TO STOCKHOLDERS

The corporation's responsibilities to stockholders, as suggested here, are to agree to pay dividends when and if declared. If capital supplied by stockholders is indeed corporate capital and the stockholders' right to vote is indeed insignificant, how can stockholders be sure that the corporation will honor its responsibilities to them?

The answer is simple: It is to the corporation's self-interest to do so.

To survive in an expanding economy, it was pointed out that the corporation has to grow; to grow it requires additional capital. To attract additional capital, it has to maintain financial competence; in maintaining financial competence, it has to honor existing financial responsibilities, including the payment of dividends to stockholders. The payment of dividends to stockholders, in other words, is consistent with and necessary to the corporation's striving for survival.

Can the corporation maintain financial competence without paying dividends? For the short run, the answer is yes, provided that it maintains economic competence in the interim. For the long run, however, the corporation has to honor this responsibility if it is to maintain an attractive investment atmosphere. To paraphrase an argument advanced in favor of the all-inclusive income statement, to which Paton and Littleton subscribe,[26] it is not the individual installment of dividend payment but its cumulative effect that is significant.

THE NATURE OF RETAINED EARNINGS

Retained earnings, following the line of reasoning advanced here, represent the accumulated income of the entity as a result of profitable operations, an additional equity of the corporation.

This view is somewhat at odds with that expressed by Paton and Littleton. Though they stated that "business earnings [are] the income of the enterprise itself until such time as transfer to the individual participants has been effected by dividend declaration," they nevertheless conceived retained earnings as a part of the stockholders' equity:

> The origin of earned surplus is essentially the accumulated balance of the income account. Once the transfer to surplus has been effected, however, the income balance becomes an acknowledged element of stockholders' equity.[27]

That this view is inconsistent was brought out by Husband, a proponent of the proprietary concept. He stated,

> Viewed as a legal entity income earned by the corporate endeavor is the property of the corporation, per se. To the extent that such income is retained in the business it in effect becomes the *corporation's proprietary equity in itself.* To consider it otherwise, as when it is treated as part of the book value of the stockholder's equity, is to imply acceptance of the agency or representative point of view.[28]

Had Paton and Littleton conceived capital supplied by stockholders as the corporation's initial equity, they probably would have considered retained earnings

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[25] In the case of Universal Oil Processes, Inc., for example, the stock offering was completely oversubscribed at 12:00 noon on the day of issue. The company was to take over and merge into an existing company whose stock was listed on the New York Stock Exchange.

[26] Paton and Littleton, *op. cit.*, p. 102.

[27] *Ibid.*, pp. 8 and 105.

[28] Husband, "The Entity Concept in Accounting," *op. cit.*, p. 554.

as an additional equity of the corporation, a position properly perceived by Husband. Taking such a position, it seems to the writer, is reasonable within the framework of the entity concept.

SUMMARY

Under the entity concept, the corporation is an institution in its own right and a competent party to contract. In contracting for capital supplied by stockholders, the only significant representation made by the corporation is for it to agree to pay dividends when and if declared. From this, it is deduced that, in a stock issue, the offering price constitutes consideration for the right to receive future dividends. Furthermore, it is argued that stockholders do not have a claim to capital thus supplied so long as the corporation remains a going concern, an implicit assumption of the entity concept. From these, it is concluded that capital supplied by stockholders becomes the equity of the corporation.

It is also argued that the acceptance of this view will not retard the stockholders' supplying capital to the corporation and that the payment of dividends is consistent with the corporation's striving to survive and to maintain an attractive investment atmosphere. On the contrary, the acceptance of this view tends to remove an area of inconsistency related to the treatment of retained earnings under the entity concept.

A NEW LOOK AT THE CLASSIFICATION OF INVENTORIES

JACK J. KEMPNER
Associate Professor, Montana State University

Among the various assets listed on the balance sheet, inventories receive as much if not more attention than any other property owned by an enterprise. Certainly there is an abundance of literature suggesting numerous methods of valuing this all important current asset and the arguments for and against the Lifo and Fifo methods of determining cost are only one of the many issues involved. On the other hand, the propriety of inventory classification is seldom raised. Is there an irrefutable law that requires inventories to be included with the current assets or is there perhaps some justification for questioning the validity of this classification? In the remarks that follow, an attempt will be made to explore the possibilities of reclassifying inventories in the belief that some of the issues involving valuation will thereby be minimized.

As a first step it might be well to review the purpose of the balance sheet, particularly the asset side. For valid reasons we often refer to this statement as one of financial position. It is primarily an array of the unexpired costs or a listing of the costs of the assets that have not yet been consumed in the operation of the business. The notion has long since been dispelled, at least among those familiar with financial statements, that the balance sheet is an attempt to record current or replacement values, the proponents of price level adjustments notwithstanding.

This definition of unexpired costs however, applies more specifically to the plant and equipment since these are usually recorded at historical cost and amortized periodically as their usefulness depreciates. Separated from this group is another combination of assets ordinarily classified as the permanent investments. These assets are not normally consumed in the operation of the business so that no periodic write-off is appropriate. Nevertheless they are usually recorded at historical cost, and with the passage of time historical cost will often be at considerable variance from current values. The third major classification, current assets, contains those properties which are already liquid or will be liquidated during the normal operating cycle of the business.

The American Institute of Certified Public Accountants has precisely defined current assets in its Restatement and Revision of Accounting Research Bulletins as follows:

> "For accounting purposes, the term *current assets* is used to designate cash and other assets or resources commonly identified as those which are reasonably expected to be realized in cash or sold or consumed during the normal operating cycle of the business."[1]

The American Accounting Association Committee on Accounting Concepts and Standards, in *Supplementary Statement No. 3 of the 1948 Revision of Accounting Concepts and Standards Underlying Corporate Financial Statements*, concurred with this definition.

> ". . . cash or resources commonly identified as those which are reasonably expected to be realized

[1] American Institute of Certified Public Accountants, *Restatement and Revision of Accounting Research Bulletins* (1953), p. 20.

in cash or sold or consumed during the normal operating cycle of the business."[2]

The assets in this current group are unique in that the majority of them will not only be realized in cash within a relatively short time, but are on the balance sheet at amounts which closely approximate current values. Receivables will be converted into cash at about the same dollar values as reflected on the financial statement. If any discrepancy exists, it will normally be due to the degree of unreliability in the allowance for bad debts. Marketable securities are ordinarily stated at the lower of cost or market so that there will usually be very little variance unless the market price has climbed considerably above original cost. However, since the type of security usually purchased for temporary investment purposes, e.g., U. S. government obligations, fluctuates very little, there will seldom be any radical change in the market price.

Inventories, on the other hand, are not reflected on the balance sheet at prices that will approximate their conversion values. Even if we were to assume a rigid price structure lasting for several years, and a conventional Fifo or average method of costing inventories, they would still be well below their realizable values. This is necessarily true since during their conversion to receivables or cash, their prices will have increased from cost to selling price. Of the four primary assets in the current section of the balance sheet, inventories seem to be the only one (except for the immaterial amounts of prepayments) not recorded at realizable values. The question naturally arises, are we forced by some unalterable axiom to include inventories with the other current assets, thereby combining resources with dissimilar valuation bases, or is there a relevant argument for segregating the inventories from the current assets altogether?

Of course, before any such change is contemplated, an inquiry into the desirability for such an alteration would be advisable. If the current section of the balance sheet is of minor importance, then no serious consideration need be given to a reclassification. However, if working capital does hold a dominant position on the balance sheet, then the accounts that are classified as current deserve continued reappraisal.

Importance of Working Capital

It should be unnecessary to deal exhaustively with the factors which have for so long pointed to the importance of working capital. The net current assets of a firm are its circulating assets and the values established for them must be current if they are to be meaningful. While most accountants and financial analysts are agreed that historical costs, when applied to fixed properties, do not usually mislead the informed reader, we are all fairly well convinced that the same criteria do not apply to the current section of the balance sheet. Management recognizes the importance of keeping constantly in touch with its level of working funds while bankers and other short-term creditors are also vitally interested in the current position of a prospective debtor before reaching a decision to grant credit. The increasingly popular working capital arrangement of the balance sheet bears testimony to this. More and more published reports deduct the current liabilities from current assets to show working capital as the first major sub-total on the balance sheet.

If management, creditors, and others are so interested in the current funds, are we isolating these funds on the financial statements in the best possible manner? Despite fluctuations in the value of the

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[2] American Accounting Association, *Supplementary Statement No. 3, 1948 Revision of Accounting Concepts and Standards Underlying Corporate Financial Statements*, p. 30.

dollar, all the current liabilities and most of the current assets will automatically be recorded at values which are fairly current. Credit obligations are not tied to the purchasing power of the dollar but will be liquidated in the actual number of dollars indicated on the statement. Concerning the assets, cash needs no further discussion. Marketable securities, if valued in accordance with generally accepted accounting principles, will be based on the lower of cost or market and any spread between market and historical cost will normally be quite narrow. Receivables, if they are really current, will ordinarily be liquidated shortly after the balance sheet date so that their values will also approximate current dollars.

How well are inventories adapted to this current classification? By definition they belong to that division of current assets which will be sold in the operation of the business. However, before they are sold and thereby converted into receivables or cash they must be processed from the raw material stage to the finished product. The duration of this conversion will depend upon the nature of the business and the stage of completion. Even in the case of a trading concern, the time lag between acquisition of the inventories by a company and its purchase by a customer will vary considerably. Although it cannot be denied that inventories will be converted into receivables or cash within the normal operating cycle, the conversion process will generally cover a longer period of time than will the sale of temporary securities or the liquidation of receivables. And as pointed out earlier, the inventories are not recorded at realizable values as are the securities and receivables. Whether they are valued at cost or the lower of cost or market, whether they are costed on the basis of a Fifo, Lifo, or average cost flow, basically these are acquisition prices rather than realizable values. Technically, working capital is undervalued since in the normal cycle of operations, the liquidating value of inventories will be considerably greater than the balance sheet figures indicate. And the degree to which this difference exists will depend upon the type of inventory, whether raw material, work in process, or finished goods. A classification of assets which includes items of high liquidity at valuations closely approximating realizable values with those that will take a longer period to liquidate and usually at a higher price than indicated is somewhat debatable.

Analysts often solve the liquidity dilemma by excluding inventories from the current ratio and calling it a "quick" or "acid-test" ratio. It occurs to me that a single current ratio would be preferable and might logically be accomplished by changing the classification of inventories. Unfortunately, use of the acid-test ratio does not solve the problem of understating the current assets. Reasonably accurate knowledge of the gross margin rate would be required to mark-up the inventories to realizable values and this sort of information is seldom available to the outsider. In addition, the amount of margin would vary with the type of inventory, e.g., raw materials or finished goods.

Controversy Surrounding Price Level Adjustments

By their very nature, most current assets have escaped the ever present controversy surrounding price level adjustments. Inasmuch as cash, marketable securities, and receivables are turning constantly, they are not distorted by fluctuations in the purchasing power of the dollar. Inventories on the other hand have not been as fortunate and the volume of discussion involving the proper valuation of this asset is another reason for challenging its traditional classification. One of the strongest arguments against the Lifo

method of costing inventories during a period of steadily rising prices is the distortion created in the current section of the balance sheet. Such distortion is further exaggerated in a balance sheet submitted by a firm that adopted Lifo ten or more years ago since most of its inventories will be based on 1949 dollars. Liquidating values will ordinarily be far above this figure.

In a letter to *The Journal of Accountancy* several years ago, Arthur M. Cannon pointed out that

> "Assets included in working capital—current assets—should perhaps be limited to those which can be and in the normal course of business will be available for payment of debt or dividends or for investment or for use in the next normal operating cycle."[8]

He further stated that

> "The current value of working capital is significant inasmuch as its capacity to produce or take the place of cash is its salient feature, and current value measures that capacity."

Mr. Cannon was not particularly recommending a reclassification of inventories, but suggested that since inventories were considered to be a current asset, they should be stated at current values. He did go so far as to say that if the proponents of Lifo were correct, then the "base-stock" portion of this inventory should be transferred to the fixed asset section of the balance sheet inasmuch as it is not available for conversion into cash or for use in meeting current obligations.

I am not proposing a reclassification of inventories in order to recommend a universal adoption of Lifo. There are several other factors involved which would continue to point toward a reclassification. However, the fact remains that more and more companies have adopted Lifo, and while prices continue to rise the trend will continue as long as there is a decided tax advantage. Is it therefore wise to continue distorting the amount of working funds and the current ratio?

Summary of Factors Weakening the Current Concept of Inventories

Before advancing any specific suggestions for reclassifying the inventories, I would like to summarize briefly the existing disadvantages of the present classification. In the first place inventories are not nearly as liquid as are the other current assets such as cash, marketable securities, and receivables. In addition, the degree of liquidity varies with the industry and even within the same company. In the latter instance, there is a divergence between the liquidity of raw materials and finished goods. If different industries are considered, the variance is even greater. In the tobacco, distilling, or smelting industries, for example, the time lag between acquisition of raw material and completion of the finished product is much greater than is the case in the weaving of cloth. Aside from the technicalities of classification, how relevant is the balance sheet value of raw material in the tobacco industry to management or credit men when contemplating the amount of funds available for meeting the payroll or discharging maturing obligations? Any realistic appraisal of available funds must eliminate a sizeable portion of these inventories.

The second factor points to a paradox that exists when the amount of circulating funds must be determined from among the working capital figures usually submitted. On the one hand, inventories that will not be converted into receivables or cash for some time must be removed from any short-term calculation of funds; otherwise the amount of funds available will be overstated. On the other hand, inventories are usually recorded at some level of acquisi-

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[8] Cannon, A. M., "Disclosure of Current Value of Inventories," *Journal of Accountancy* (February, 1950), p. A-42.

tion cost and it is then necessary to arbitrarily increase them to realizable values in order to avoid understating the amount of funds available. Considerable analytical gymnastics might be avoided if we simply dropped inventories from the fund classification altogether.

Thirdly, the varying methods of determining inventory costs complicates the task of comparing working capital between two or more companies even in identical industries. It is also recognized that within the same company inventories in different stages of completion frequently do not have comparable bases. In a recent issue of *Accounting Trends and Techniques* published by the American Institute,[4] the following breakdown in the methods of determining cost was noted:

Lifo	200 reporting firms
Fifo	145 reporting firms
Average cost	141 reporting firms

There are other combinations of course, but these three represent the predominant methods. Certainly the methods indicated result in considerable variations in aggregate valuations. Furthermore, although most firms valued their inventories on the basis of the lower of cost or market, cost is still used and further confuses the task of comparison.

One final valuation problem that has not yet been mentioned is direct costing. Because the exclusion of fixed overhead from inventories is not yet an accepted accounting principle, working capital is not distorted in conventional balance sheet presentations. However, one of the main arguments against the acceptance of direct costing for balance sheet purposes is the claim that such valuations would understate current assets by the amount of fixed burden charged out as a periodic expense. Under the present methods of classifying inventories this is obviously a justifiable argument. The amount of working funds is such a key figure on the financial statements that we presumably hesitate to do anything that will distort its usefulness.

Nevertheless we recognize the advantages of direct costing for managerial purposes and often recommend this treatment in supplementary statements. Whether direct costing ever becomes an accepted accounting principle or not, it is probably safe to assume that a large proportion of corporations will continue to use it for internal reports.

It is beyond the scope of the present article to completely explore the ramifications of direct costing of inventories. However, at least one major objection to its adoption would be overcome if inventories were not included with the current assets; working capital would not be affected. In any case the variances caused by eliminating the fixed overhead charges from work in process and finished goods would be no greater than those caused by determining cost through Lifo as opposed to Fifo methods.

It would seem that no other current asset presents so many problems. Cash is already liquid and possesses no conflicts in valuation. Securities are usually valued at cost or the lower of cost or market and this valuation will be fairly close to market since dates of acquisition will normally not be very far removed from the balance sheet date. With respect to receivables, they are valued at anticipated collection values, and although there may be some slight variation in the method of estimating the allowance for bad debts among different firms, there are seldom any wide discrepancies. And in view of the fairly rapid turnover of receivables, any minor movement in the purchasing power of the dollar presents no problem in price level adjustment.

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[4] American Institute of Certified Public Accountants, *Accounting Trends and Techniques* (1957), p. 53.

Suggestions for Reclassification

One solution might be to dispense with the various methods of pricing and costing inventories and propose a uniform adherence to a single method. Fortunately the prospect of enforcing rigid rules of accounting principles has always met with resistance on the part of the accounting profession. The reluctance to consider seriously recent proposals for an accounting court is a case in point. What then are we to do? If it is agreed that optional methods of valuing inventories are preferable, are we justified in allowing such figures to cloud the concept of working capital? I would venture to repeat again that we might be further ahead if we eliminated the inventories from the current asset classification.

In its *Restatement and Revision of Accounting Research Bulletins*, the Committee on Accounting Procedure admits that if conventions of accounting relative to presentation of assets are made logical, the amount, bases of valuation, etc., will provide valuable data for credit purposes.[5]

> "It is important that the amounts at which current assets are stated be supplemented by information which reveals . . . for the various classification of inventory items, the basis upon which their amounts are stated and, where practicable, indication of the method of determining the cost . . . e.g., average cost, fifo, lifo, etc."[6]

Here is additional evidence of the need to reappraise the problem child of the current assets. Even though we surround the inventories with all sorts of supplementary information concerning the basis of valuation, the outside analyst finds it particularly difficult to convert the balance sheet figures to an amount that will reveal the level of working funds available in these inventories.

If this asset were reclassified, our concept of current ratios would have to be revised. Whereas we may now consider a current ratio of 2 or 3 to 1 appropriate for a particular industry, the exclusion of inventories from this computation would permit a step downward to a ratio of possibly 2 or 1 to 1. Since most bankers and credit men now use the acid-test ratio, it would not require much effort to re-educate those who make use of financial statements. The current ratio and the acid-test ratio would be identical, with no need to compute both. The banker already knows that a large portion of the inventories, regardless of their basis of valuation, will often not be available to meet obligations maturing within the next three to six months and therefore eliminates them from his calculation of working funds. Since it is the accountants' avowed purpose to present meaningful financial data, it is perhaps time to reconsider our conventional methods of presenting these data.

Before recommending a new location for inventories, it may be appropriate to first look at the other major asset classifications. Permanent investments normally follow the current asset section and are succeeded by plant and equipment. Inventories can hardly be associated with the permanent investments so little thought need be given to inclusion with this group of assets. It has occasionally been suggested that at least the base stock portion of Lifo inventories is not for resale but is used in the operation of the business. To a certain extent this is a valid point. A firm cannot maintain operations unless it always has on hand a minimum basic stock. If the units comprising this base are valued at original cost, they then correspond in part to the conventional definition of fixed assets: property used in the operation of the business and not for re-

[5] American Institute of Certified Public Accountants, *Restatement and Revision*, *op. cit.*, p. 20.
[6] *Ibid.*, p. 23.

sale. Whether one accepts this theoretical conclusion or not, it is still difficult to align even the base stock inventory with other fixed assets that are subject to periodic depreciation over their useful lives. To include inventories or any portion of them with the fixed assets might create as many new problems of classification as they would eliminate.

There seems to be only one logical place to locate inventories on the balance sheet and that is in a separate section immediately below the current assets. The basis of valuation can be indicated in much the same manner as it is now, and whether they are priced at cost, the lower of cost or market, cost or less than cost "not in excess of market," lower of two different costs or market, or any other method, it will not affect working capital or current ratio calculations. The assets that comprise the current section of the balance sheet will contain only cash and those assets that have approximately the same basis of valuation. Furthermore, the amounts at which these remaining assets will be liquidated will closely parallel the figures recorded on the balance sheet. If the reader of the financial statements wishes to determine the amount of the inventories, he need only scan the figures immediately below the current assets to find it. Such determination will not influence one's concept of the level of current funds available nor will the varying methods of pricing inventories or arriving at cost have any bearing on these current funds.

No mention has been made of the prepaid expenses which are presently included with the current assets. The relative amount of the prepayments is usually so insignificant that no material distortions of working capital would normally result regardless of how they were classified. Nevertheless they are more in the nature of unexpired costs rather than assets that will be liquidated at balance sheet values. Rather than trouble ourselves with a separate classification or include them with the long-term deferred charges as has been done in the past, they can conveniently be grouped with the inventories.

With the reclassification suggested above, the definition of current assets can be altered to read as follows:

The term current assets is used to designate cash and other assets or resources commonly identified as those which are reasonably expected to be realized in cash at current balance sheet values during the normal operating cycle of the business.

Reference to the definition of current assets as it is now prescribed by both the Institute and American Accounting Association will reveal that the words "or sold or consumed" were eliminated, and the phrase "at current balance sheet values" added since receivables and securities will normally be liquidated at such values. These assets would now comprise a much more homogeneous unit with liquidity potential about the same, and a uniform current basis of valuation.

The 1958 Annual Report of the Caterpillar Tractor Company has recognized the desirability of segregating inventories from the other current assets and has taken a partial step in the direction of reclassifying them. The current asset section of the balance sheet is presented as follows:

Current Assets:	
Stated on the basis of realizable values:	
Cash	$XXX
Securities	XXX
Receivables	XXX
Stated on the basis of cost using principally Lifo method	
Inventories	XXX

Of course this presentation does not alter the amount of working capital nor the current ratio. To have eliminated the inventories entirely from the current assets under presently accepted accounting principles would have required a qualification

in the auditor's report. As presently submitted, no qualification was necessary, yet there is the unmistakable implication that inventories are a separate breed of current asset and should be treated differently from cash, securities, and receivables.

Conclusions

The American Accounting Association in its 1948 *Revision of Accounting Concepts and Standards Underlying Corporate Financial Statements* emphasizes the fact that assets should be *classified* (italics are mine) in such a manner as will facilitate the accounting for their utilization and the preparation and interpretation of financial statements.[7] Do our present reporting standards fulfill this goal in the best possible manner?

No major alteration in generally accepted accounting principles is ever adopted until after it has received serious consideration and until the conclusion has been reached that such a change is in the public interest and will improve the public's interpretation of accounting data. This is fortunate since accounting concepts and methods of reporting would be reduced to chaos if principles were altered upon the slightest provocation. At the same time accounting is a dynamic discipline and we seldom cling to static conventions simply because they have withstood the test of time.

I sincerely believe that a searching appraisal of the present classification of inventories is justified. An immediate change is not suggested for the reasons cited above. Nevertheless I would propose an objective study of our present treatment of inventories and urge that we ask ourselves honestly whether the conventional classification of inventories is the best possible choice or one which we accept through force of habit?

[7] American Accounting Association, *1948 Revision of Accounting Concepts and Standards*, *op. cit.*, p. 17.

CURRENT CHALLENGES TO ACCOUNTING PRINCIPLES

V. E. ODMARK
Associate Professor, San Diego State College

DURING the past twenty years, several rashes have appeared on the body accountancy indicative of conditions far more reaching and significant than the surface symptoms. A physician studies symptoms in order to determine the underlying causes of physical and psychic disorders. An accountant should do no less in his area of competency; the symptoms are readily discernible. He has but to read them and then diagnose the basic difficulties. This paper will attempt to identify some of these symptoms and to diagnose their origins.

Some of the more discernible symptoms include the accounting problems raised by build-sale-leaseback agreements, various forms of accelerated depreciation, and LIFO. These innovations have occurred in a period which has been characterized by rapid changes in the value of money. In fact, it is unlikely that these procedures would have developed to such an extent in a period of stable prices. This paper will explore the development of these techniques and their relationship to present generally accepted principles of accounting.

A study of *Accounting Trends and Techniques* published annually by the American Institute of Certified Public Accountants indicates a trend over the years toward long-term leasing of property as opposed to direct ownership. It is the contention of this writer that this trend has developed because management desires to obtain higher charges against revenue than is possible under original cost amortization.

It is often averred that the motivating factors in many of these leasing arrangements, particularly in the case of build-sale-leaseback contracts, have been to permit the corporation to free its capital from fixed asset investment and to permit its use in operational areas in which the company is more experienced or to channel it into further capital expansion cycles of a like nature. It is doubtful whether these are the primary factors in lease financing.[1] Much the same results, insofar as cash flows are concerned, can be achieved by mortgage loans on existing property or the acquisition of property through the use of purchase-money mortgages. A more direct factor in many instances appears to be the securing of a higher charge against operations than is possible through annual depreciation charges based upon historical cost. This higher charge against operations subsequent to sale and leaseback is advantageous in that it lowers the annual income subject to high corporate income tax rates and the gain resulting from the sale of the fixed asset is normally of a long-term nature and subject to lower capital gains rate. This was particularly true before the 1954 federal income tax code which provided for liberalized depreciation charges for new assets acquired after December 31, 1953.

In discussing lease financing as affected by the 1954 tax code, Cohen concludes that the major change which might be expected to result from permission to use

[1] This question has been thoroughly explored by Albert H. Cohen, "The Future of Lease Financing Under New Depreciation Rates," *The Journal of Accountancy*, August 1954, pages 189–196.

the declining-balance method will be to make "less desirable leasing agreements which would have been very advantageous from the tax point of view if only straight-line depreciation were available to the taxpayer."[2] In all likelihood, then, as a result of the liberalization of depreciation allowances permitted by the federal tax code, we may expect a decline in the use of the build-sale-leaseback arrangement. The federal government has provided the accountant with a "stop-gap" measure which lies within generally accepted accounting principles. This measure, however, as will be noted later in this paper, merely postpones the vexing problem created by inflation.

Depreciation became a disputed issue in 1947 when the United States Steel Corporation, among other companies, struck out on a new course by charging against operations an additional depreciation charge representing estimated increased replacement costs. In its annual statement for 1947, the company stated:

> During the year 1947, in partial recognition of the increased replacement cost of long-term facilities which are being worn out or exhausted in production, the corporation has included in costs additional depreciation of $26,300,000 (as indicated in the notes to the accounts) in excess of the amount determined in accordance with the generally accepted accounting principles heretofore followed of making provision for depreciation on the original cost of facilities.

The response of the accounting profession against this new departure was prompt and traditional. In December 1947, the Institute issued its *Accounting Research Bulletin Number 33* reiterating its position that accounting for fixed assets is to be based on original cost and that higher costs of replacement are to be dealt with by reservations of earnings rather than through charges against operations. This position was reaffirmed in a letter sent by the Institute to its members on October 14, 1948; this letter stressed that: "Any basic change in the accounting treatment of depreciation should await further study of the nature and concept of business income."[3] Such a study was completed in 1953 when the Institute published *Accounting Research Bulletin Number 43;* no change in the treatment of depreciation was forthcoming.

The influence of the Institute's pronouncements was quickly felt. In the 1950 edition of *Accounting Trends and Techniques*[4] it was revealed that, in 1947, 44 companies had made additional charges beyond historical cost either to operations, net income, or retained earnings; in 1948, the figure was 45 companies; in 1949, 38 companies. By 1952, only 19 companies showed reserves for higher plant replacement cost; by 1954, the battle was almost over and all but ten companies had capitulated to the Institute's edict.[5]

Other influences were at work which served to strengthen the adamant position of the Institute. In its 1954 annual report, Pittsburgh Plate Glass Company returned its reserve for higher replacement costs to retained income with this comment regarding the 1954 tax code:

> Since partial relief from inadequate depreciation allowances has been provided by this change in depreciation accounting procedure, and since no further substantive changes may be expected in the immediate future, the practice of appropriating amounts for replacement of obsolete and worn-out facilities at current prices has been discontinued. The amounts previously set aside under this procedure have been returned to unappropriated earnings retained for use in the business.[6]

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[2] *Ibid.*, page 195.

[3] *Accounting Research Bulletin No. 43,* Chapter 9, Section A, page 69.

[4] American Institute of Certified Public Accountants, *Accounting Trends and Techniques* (New York: American Institute of Certified Public Accountants, 1950), page 94.

[5] *Ibid.*, 10th edition, 1956, page 164.

[6] The company adopted in 1954 the sum-of-the-years'-digits method of accounting for depreciation of property additions for 1954 and later years.

Several companies in their 1955 reports indicated that they were now following the policy of providing depreciation in excess of cost *only* on assets acquired in prior years.[7] The 1954 tax law provided the answer to current acquisitions. Congressional action had provided a partial and temporary solution to the problem of inadequate depreciation charges.

In the businessman's stress upon immediate solutions, however, he often overlooks the fact that only short-run benefits are secured from accelerated depreciation. Even with further liberalized depreciation write-offs in the offing, this still remains true. The problem of adequate charges against revenue is merely deferred by the adoption of the various depreciation methods now permitted under federal tax laws. These new methods do not strike at the heart of the problem: higher current costs.

Another area of ferment symptomatic of an accounting malady has been in the costing and valuation of inventories together with the growing interest in LIFO during the past fifteen years. In 1947, 111 companies out of the 600 companies whose reports were surveyed utilized LIFO in their determination of inventory costs; by 1950, the number had grown to 161 companies; by 1955, 195 companies were LIFO users.[8]

There has been much conjecture as to the rationale involved in a company's adoption of LIFO. Such explanations range all the way from a sophisticated rationalization of a closer articulation of current costs with current revenues to a frank admission of the profound influence which federal income tax regulations have upon accounting practice.[9] Whatever the rationalization, the effect has been the introduction of more nearly current costs into the income statement.

Concomitant with the current emphasis upon the operations statement, little concern has been shown for the deleterious effects which this inventory method (actually a costing method) has upon the balance sheet figures which emerge as a residual. In a company where inventories constitute a major or substantial portion of current assets and where LIFO is utilized, little object is served in calculating a current ratio or turnover of inventories; such calculations are meaningless! In recognition of this situation, it is sometimes suggested that the balance sheet is no longer a statement of financial position but merely a postclosing list of the open ledger accounts.[10] That this interpretation of the balance sheet is not acceptable to many accountants is evidenced in the position taken by the American Accounting Association Committee on Concepts and Standards in its 1957 revision of *Accounting and Reporting Standards for Corporate Financial Statements* which states that, ideally, the measurement of cost of goods sold should "report in current terms the cost of products and services transferred to customers during the period" and should "report in current terms the costs present in inventories at the end of the period."[11] The acceptance of such a proposal would reinstate the inventory portion of the balance sheet in significant terms and make calculations of ratios involving inventories a useful, rather than a meaningless, exercise in arithmetic.

Each of these solutions—LIFO for inventory and leasing and accelerated depreciation for plant and equipment—rep-

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[7] American Institute of Certified Public Accountants, *op. cit.*, page 160.

[8] *Ibid.*, page 64; *Ibid.*, 6th edition, 1952, page 59.

[9] Herbert T. McAnly, "The Current Status of LIFO," *The Journal of Accountancy*, May 1958, pages 55–62; Rufus Wixon and Walter G. Kell, Editors, *Accountants' Handbook*, 4th edition (New York: The Ronald Press, 1956), pages 12·33–12·37.

[10] American Institute of Accountants, *Accounting Terminology Bulletins* (New York: American Institute of Accountants, 1953), page 12.

[11] American Accounting Association, *Accounting and Reporting Standards for Corporate Financial Statements, 1957 Revision* (Columbus: American Accounting Association, 1957), page 6.

resents a makeshift adjustment, an attempt to adhere to historical cost and yet get the advantages of current costs. It is a tacit admission of the inadequacy of historical cost in a period of rapidly changing prices and at the same time an unwillingness to cut loose from the security, simplicity, and objectivity offered by historical costs. It is a "hold-on-to-the-old" but yet "shift-over-to-the-new" philosophy. As such, it is inconsistent and raises a whole host of new problems.

Surely it is time for the accounting profession to reexamine the basic assumptions under which contemporary accounting has developed. This point has been well stated by Mr. Oswald W. Knauth in discussing the problems facing accountants:

> They cannot revise their principles with every wind that blows, but they also cannot remain unmoved by an earthquake. Yet dynamic innovation and change is the characteristic of the increasingly complex economy which we have developed. Management feels no obligation to ease the problems of accountants—rather it is for the accountants to accommodate their methods to the necessities of business. Hence, accountancy in the last decade has posed the most fascinating and controversial problems. The principles and methods of the past are constantly found wanting and inadequate for the new solutions that are constantly required.[12]

Failure to move off dead center brings merited criticism upon the accounting profession. Evidence of this disrespect is found in a recent article in *The Reporter* entitled "The Gentle Art of Tax Avoidance" where the practice of accelerated depreciation and the use of LIFO are presented as artful tax avoidance schemes based on legal fiction rather than economic realities.[13] In an article in the *Harvard Business Review*, Mr. Leonard Spacek, a practicing accountant, deals no less gently with his professional brethren by pointing out that, with stress upon protecting the accountant against liability, the primary concern is whether a company's performance conforms to that in comparable cases and therefore is accepted practice, whether the principle produces a result that is right or wrong becomes secondary. He makes the point that "Conformity with the needs of the past, rather than with the needs of the present, is encouraged."[14]

Where do we go from here? We need to engage in a bit of soul searching regarding our basic assumptions. Are we performing our primary function of protecting the various equities interested in modern business enterprise or are we solely record keepers? Do our reports reflect as truthfully as we can the results of operations and financial condition? Are we so overly engrossed with the arithmetic accuracy of the historical accounts that we fail to appreciate that they may no longer represent the most significant area of accounting concern? Are we to wait for management to provide the leadership in areas rightfully belonging to the accounting profession? Or will the accounting profession abdicate its responsibility and let the statistician, the economist, the operations researcher—all less bound by tradition—provide the answers needed by business management, investors, and other interested groups? The time for definitive action is surely now.

What direction should this soul searching take? It should be oriented in terms of the basic purposes of accounting. Of the many listings of accounting functions, at least three major ones may be delineated: recording, controlling, and protection of equities. The need for the recording function, the antecedents of which are to be found in antiquity, is self evident. Although the techniques of recording and the

[12] Oswald W. Knauth, "An Executive Looks at Accountancy," *The Journal of Accountancy*, January, 1957, page 31.

[13] John L. Hess, "The Gentle Art of Tax Avoidance," *The Reporter*, April 16, 1959, pages 12–17.

[14] Leonard Spacek, "Challenge to Public Accounting," *Harvard Business Review*, May–June, 1958, page 117.

methods of information storage change, the need for an historical record continues. The control function, more recent in development, presents some of the most challenging problems of the day. These range all the way from the broad aspects of revenue and expense control down to technical problems in the utilization of manpower, materials, and capital to achieve the objectives of the organization.

It is in the more recently developed function of protection of equities, however, that we may find a guide to the establishment of accounting assumptions which are germane to mid-twentieth century economic problems. It is through the development of this third function that accounting has come of stature and has been recognized as a profession with responsibilities to society over and above its responsibilities to its clients. Several factors have contributed to making the protection of the interests of various groups the most important objective in accounting. Among these are the predominance of the corporate form of organization, regulatory control of business enterprise by government agencies, and far wider ownership of corporate stocks. As a result, accounting has, during the past 50 years, undergone a gradual shift in emphasis from accounting for creditors and informed owner-management groups to providing information to such diverse groups as owners divorced from management, governmental agencies, labor unions, financial analysts, prospective individual and institutional investors, *et al.*[15]

Our basic assumptions should provide a foundation upon which may be erected the framework of rules and techniques that will produce useful and truthful information to meet the needs of these diverse groups. Such assumptions must be relevant to the current economic scene and must not be divorced from reality. This means that assumptions which have served us so well in the past—historical cost, going concern, stable monetary unit—must be subject to question and evaluation in terms of the concrete situations of today.

Supplementary Statement No. 2 on *Price Level Changes and Financial Statements* published by the American Accounting Association in 1951 represents some bold thinking in and presents some positive proposals toward the solution of the problems presented by fluctuating price levels. It does so, however, within the framework of historical cost. Its proposals result in a matching of revenue expressed in terms of the specific price level for the products being sold and historical costs which have been uniformly adjusted for general price level changes. There is serious doubt whether the net income resulting from this heterogeneous matching process—revenue in terms of specific index dollars and costs in terms of general index dollars—is the most useful one possible.[16]

It would seem more reasonable to argue that, for the various groups which look to the financial reports for information, the only costs which are significant and useful in the making of decisions and formulation of judgments are current costs, i.e., costs which are being paid or incurred or would have to be paid or incurred now for the same items or services.[17] Thus, the emphasis is not upon replacement costs *per se*; there may be no intention to replace an identical asset; instead, the concern is with the present cost of the economic sacrifice represented by the item or services used up or sold.

[15] W. A. Paton and A. C. Littleton, *An Introduction to Corporate Accounting Standards* (Chicago: American Accounting Association, 1940), pages 1–4.

[16] Henry M. Steele, "Managerial Uses and Limitations of Uniform Dollar Accounting Data," The Accounting Review, April, 1959, page 243.

[17] Willard J. Graham, "The Effect of Changing Price Levels Upon the Determination, Reporting, and Interpretation of Income," The Accounting Review, January, 1949, page 23.

It is to be hoped that the proposed reorganization of the research program of the American Institute of Certified Public Accountants[18] may lead to a restatement of accounting assumptions and principles which will be relevant to the present day needs of management and of those other groups with an interest in financial reports. The Institute gave formal recognition to this need for relevancy in the introduction to *Accounting Research Bulletin No. 43*:

> The test of the corporate system and of the special phase of it represented by corporate accounting ultimately lies in the results which are produced. These results must be judged from the standpoint of society as a whole—not merely from that of any one group of interested persons.[19]

In too many instances, however, present accounting research bulletins have not adhered to the standard set in this quotation.[20]

In this reorientation of accounting assumptions to enable the accounting profession to perform its primary function of protecting the equities of the many groups involved in corporate enterprise, the following general propositions are suggested:

a. That original cost is usually the best measure of value at time of acquisition of an asset.

b. That accounting cannot continue to ignore value; that almost every decision of the accountant is concerned with valuation.

c. That current decisions are based upon current values.

d. That the determination of income is one of the accountant's most important tasks.

e. That such determination of income should be based on the most accurate articulation of current revenue with current costs.

f. That assets should be presented on the balance sheet at current values by using direct valuation or specific indices as appropriate.

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[18] "Report to Council of the Special Committee on Research Program," *The Journal of Accountancy*, December, 1958, pages 62–68.

[19] *Accounting Research Bulletin No. 43*, page 7.

[20] Leonard Spacek, "Can We Define Generally Accepted Accounting Principles," *The Journal of Accountancy*, December, 1958, page 45.

THE ALLOCATION OF INCOME TAXES—A DEFENSE

ROBERT K. JAEDICKE
Assistant Professor, Harvard University
AND
CARL L. NELSON
Professor, University of Minnesota

IN THE April, 1958 issue of THE ACCOUNTING REVIEW, Sidney Davidson analyzes the income tax allocation problem and presents a strong case against allocation.[1] Davidson sets up two questions as the proper criteria to use in deciding whether or not allocation is appropriate. If the answer to these two questions is affirmative, allocation is not appropriate. These two questions are as follows:[2]

> "(1) Are tax rules for depreciation methods expected to remain as generous as they now are? and
> (2) Will a policy of regular investment in assets subject to depreciation be maintained?"

If the answers to these above questions is affirmative, Davidson concludes that there will be no future tax liability and the problem of allocation is disposed of once and for all. "Only if questions (1) and (2) cannot be answered favorably is there any need to consider the other criteria."[3]

The purpose of this article is to present a case for the allocation of income taxes even where the above two questions *can be answered in the affirmative*. The assumptions in this article are the same as in Davidson's article, namely:

(1) Income tax problems arising from the use of straight-line and accelerated depreciation methods are the only problems to be considered.
(2) It is assumed that income taxes are considered an expense rather than a distribution of income.[4]
(3) The firm has already decided to use straight-line depreciation for income reporting and accelerated depreciation for income tax purposes.
(4) The firm is not a "one asset" firm since the answer to question (2) above is affirmative.

REPAYMENT OF THE LIABILITY

Davidson argues against allocation primarily on the grounds that a firm that is static or growing will never have to repay the "liability." "So long as the firm follows a regular investment policy, it will receive a 'gift' of having its income tax payments permanently reduced."[5]

This approach to income measurement could result in a "cash flow" type of income statement. On grounds that "a policy of regular investment in assets subject to depreciation (is being) maintained," all expenditures for plant could be charged against current operations. Or, conversely, only the payments made to suppliers of materials and services could be shown as an operating deduction, on the grounds that the increase in accounts payable is a permanent liability that

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[1] "Accelerated Depreciation and the Allocation of Income Taxes," THE ACCOUNTING REVIEW, April, 1958, pp. 173–180.
[2] *Ibid.*, p. 173.
[3] *Ibid.*, p. 174.
[4] The authors share Davidson's views that income taxes should preferably be treated as an income distribution; this difference in approach will not affect the conclusion reached.
[5] *Ibid.*, p. 177. Davidson's evidence of regularized (and growing) investment carries the data through 1957. In 1958, investment in producers' durable goods decreased almost 13%. (*Data* from *Survey of Current Business*, p. 3.)

would never have to be paid. The same argument might be applied to the current Federal income tax liability. Consider the following example applied to accounts payable:

Balance Sheet—12/31/57

Cash	$100,000
Capital stock	$100,000

During the year, 1958, the following transactions take place:

1. Merchandise costing $200,000 is purchased, $100,000 for cash and $100,000 using trade credit.
2. All the merchandise is sold for $400,000 cash.
3. Other expenses (salesmen's commissions, for example) are paid in cash, $100,000.
4. The liability of $100,000 is not paid. Next period, the liability will be paid but the firm will obtain another $100,000 credit and this process will be repeated indefinitely. Therefore, for all practical purposes the $100,000 liability will never have to be repaid.

It seems that if the above criterion regarding the repayment of the liability is used in testing whether or not an expense has taken place, the income statement for 1958 would appear as follows:

Income Statement for 1958

Sales		$400,000
Expenses:		
Cash purchases	$100,000	
Other expenses	100,000	200,000
Net income before taxes		$200,000

The balance sheet at the end of 1958 would then appear as follows:

Balance Sheet—12/31/58

Cash		$300,000
Capital stock	$100,000	
Retained earnings	200,000	$300,000

It seems doubtful if such a practice would ever be accepted by either businessmen or accountants. Yet, the firm may never have to repay the permanent trade credit and it seems that this situation is very much like the income tax problem. In 1959, the firm would be forced to include the payment of liabilities as an expense, but if it managed to borrow another $100,000 the effect on 1959 income would be the same. To the extent that trade credit is growing[6]—just like the growth in the income tax loan—income will also grow. Actually, the "income tax loan" in an expanding firm acts much the same way as the increasing trade credit. If the income tax is levied on "one asset," it is true that in the later years of life the firm will pay the government back part of the "loan" that it received in the early years. However, in an expanding firm, another asset will be purchased in the second period which will give the firm more "borrowing power" and the "tax loan" (under Davidson's assumption) will at least remain the same or perhaps increase in amount. What, then, is the difference between these two situations?

A SUGGESTED SOLUTION TO THE PROBLEM

Davidson would undoubtedly point out that the difference is that the accounts payable meets the conventional tests set up for liabilities and the deferred income tax does not.

One possible solution is that the accountants' concept of liabilities may change. Concern over accounting treatment of the obligation assumed on a long-term lease and the past-service credits of pension funds may produce a redefinition of liabilities.

Another possibility is to recognize that the use of accelerated depreciation methods provides a source of funds[7] which are interest free and that may never have to be repaid. This being the case, the financial statements should show this source of

[6] Accounts payable of all U. S. corporations increased each year from December 31, 1948 to December 31, 1958, with the exception of 1949 (decrease—5%), 1957 (decrease—0.4%), and 1958 (decrease—4%). Data from *S.E.C. Statistical Bulletin*, April, 1959, October 1958, January 1958, January 1957, January 1955, April 1954, and October 1953.

[7] The House Committee Report on the Internal Revenue Code of 1954 includes the following (italicizing supplied), "The faster tax write off *would increase available working capital* . . . ," p. 586 as published in *U. S. Code Congressional and Administrative News—1954.*

funds. The fact that the "liability" is unlike most other equity accounts should cause no difficulty in balance sheet presentation. Perhaps, what has happened is that, due to a change in the regulatory environment within which the firm operates, a new source of funds has arisen. If this is the case, perhaps changes should be made in balance sheet classification and the income determination process rather than to attempt to fit this new phenomenon into the same old inflexible mold of conventional accounting practices. Such a procedure is illustrated below using a very simple example.

The above allocation procedure shows the tax differential as a source of funds rather than including the $2,500 as funds from operations. It seems that this presentation comes closest to showing the facts. Furthermore, this kind of presentation comes very close to allocating the tax differential in the true sense of the word. The $2,500 must be shown on the balance sheet but there are a variety of possible treatments. This amount might be included in the liabilities section under a new liability classification, "liabilities in perpetuity," or "loans with an indefinite or infinite life." On the other hand, this

Balance Sheet—1/1/58

Cash	$100,000
Plant (20 year life)	100,000
	$200,000
Liabilities	
Capital stock	$200,000
	$200,000

Transactions for the year 1958:
1. Cash sales, $1,000,000.
2. Cash purchases and other expenses, $800,000.
3. Depreciation (straight line) for reporting purposes, $5,000.
4. Depreciation (accelerated) for income tax reporting, $10,000.
5. Income tax (assuming accelerated depreciation and a 50% rate) is $95,000, computed as follows: $200,000 income before depreciation and tax less $10,000 depreciation times 50%.
6. Income tax (if straight-line depreciation is used) is $97,500, computed as follows: $95,000 tax using accelerated depreciation plus 50% of $5,000 (the depreciation differential).

	Income Statement for 1958 (no allocation)		*Income Statement for 1958 (with allocation)*	
Sales		$1,000,000		$1,000,000
Expenses:				
Cash expenses	$800,000		$800,000	
Depreciation	5,000		5,000	
Income tax	95,000	900,000	95,000	900,000
Net income after tax		$100,000		$ 100,000
Less: Adjustment arising from differences between tax and report accounting methods				(2,500)
Net Income after tax				$ 97,500

Statements of Sources and Uses of Funds
For the Year, 1958

	Income Tax Not Allocated	*Income Tax Allocated*
Source of Funds:		
From operations	$105,000	$102,500
From government loan arising from the use of accelerated depreciation	0	2,500
	$105,000	$105,000

amount might be shown as part of the stockholders' equity section of the balance sheet, entitled "loans from Government" or perhaps "subsidies from Government."[8] The writers feel that the procedure described above achieves the proper distinction between "capital" and "income."

Another argument that might be advanced in favor of the above treatment is that comparison between companies would be facilitated.[9] Suppose that two companies are being compared which are alike in all respects except that one company uses an accelerated depreciation method for tax purposes and the other uses straight-line depreciation for both tax and reporting. The company that uses an accelerated method is better off than the other company but *not* because the operating income is higher; rather because there has been a provision of funds (through decreased taxes) and, other things being equal, this additional source of funds should augment working capital and future income. If the income statement and the funds statement are prepared and used properly, this difference between the two companies will show up without any distortion to the income statement.

CONCLUSIONS

So long as income taxes are treated as expenses, the differential tax resulting from using different accounting methods for reporting and tax purposes should be "allocated" so as to show the new source of funds arising from this practice. This should be done regardless of whether or not the liability will ever have to be repaid. Such a procedure will be helpful in assessing the effects on working capital of good operations and wise income-tax management.

[8] This item would be similar to "Contributions in Aid of Construction," Account 265 in the F.P.C. Uniform System of Accounts.

[9] Davidson favors "disclosure of any difference between the amount of depreciation claimed on the tax return and that shown in the income statement." Davidson, *op. cit.*, p. 180. Supposedly this would appear in the footnotes. The authors believe that important disclosures should (if possible) be included in the statements rather than in the footnotes.

SIGNIFICANT DIFFERENCES BETWEEN U. S. AND CANADIAN REQUIREMENTS FOR THE C.P.A. AND C.A. CERTIFICATES

CLIFFORD L. TURNER
Price Waterhouse & Co.

SEVERAL years ago a committee of practitioners and educators studied the requirements for the certified public accountant's certificate in the United States. This Commission on Standards of Education and Experience for Certified Public Accountants made various long-term recommendations.[1] Recently a special committee of the Institute studied the recommendations in the Commission's report, reported to the council of the Institute, and certain resolutions on education and experience for certified public accountants were adopted by Council.[2] These resolutions took exception to some of the long-term recommendations of the Commission.

Because of the general interest in this subject, it might be of value to compare the requirements which have evolved in neighboring Canada, or more specifically in the Province of Ontario, with those presently in effect in several of our states and with the Commission's recommendations. The author, a New York C.P.A., recently spent several months in Toronto working with chartered accountants, and while there he had an opportunity to study some of the educational and experience requirements for the chartered accountant's certificate, to look over examination questions, and to talk to a number of interested people on the subject.

Before relating the more significant aspects of each body's present set of requirements, it might be well to review briefly the basic organizational setup of the profession in the two countries and to indicate the general practices in each area.

In the United States the examinations and requirements are set and administered by an agency of the state government while in Canada the provincial institutes of chartered accountants determine the requirements.

These provincial institutes are similar to our state societies of C.P.A's and are not an arm of the government. A uniform examination at the intermediate and final level is used throughout Canada—the same as is done throughout the United States. Although a C.P.A. does not have to belong to either the American Institute of Certified Public Accountants or a State society of C.P.A.'s in order to retain his title of certified public accountant, a Canadian accountant cannot use the designation chartered accountant unless he is a member of one or more of the ten Provincial Institutes of Chartered Accountants which grant the certificate. In fact, all C.A.'s are automatically members of the Canadian Institute of Chartered Accountants. The national institute receives a portion of the fees paid by the members to the local body.

For the purposes of this paper, we have selected the C.P.A. requirements of four states (New York, Illinois, California, and Alabama)—one from each section of the

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[1] *Standards of Education and Experience for Certified Public Accountants*, published for the Commission on Standards of Education and Experience for Certified Public Accountants by The Bureau of Business Research, University of Michigan, 1956.

[2] "Resolutions on Education and Experience for CPAs," *The Journal of Accountancy*, June 1959, p. 6[illegible]

United States—to compare with the Ontario C.A. requirements. The significant requirements of these five jurisdictions as well as the long-term recommendations of the Commission on Standards of Education and Experience for C.P.A.'s are presented in the tabulated summary.

Comparison of educational requirements

Is a college degree necessary? Yes, in New York. No, in the other jurisdictions, but both Illinois and California do require some education at the college level. These two states and the Province of Ontario recognize a college degree by reducing the experience requirements for college graduates. (Illinois does not require any practical experience for the C.P.A. certificate, but experience is one of the prerequisites for obtaining a license to practice as a public accountant.) The Commission on Standards in its long-term recommendations went further than this and suggested a year of postgraduate accounting study in addition to the four years of college.

In Ontario a student must have at least a Grade XIII Ontario Department of Education standing or its equivalent in eight papers. A United States high school graduate is only deemed to be equivalent to a Grade XII education in Canada and thus not eligible to qualify without further education. In this respect the minimum Ontario requirements are higher than the requirements of some of the states of the United States although they are lower than three of our four selected states. As mentioned above the student must present eight papers, three of which are required—English literature, English composition, and algebra. The optional papers may be in any five of the following twenty-two: accountancy practice, botany, chemistry, French authors, French composition, geography, geometry, German authors, German composition, Greek authors, Greek composition, history, Italian authors, Italian composition, Latin authors, Latin composition, music, physics, Spanish authors, Spanish composition, trigonometry and statics, and zoology. These are the minimum educational requirements. Of course, most college graduates in the United States would have the equivalent of these requirements. The Ontario Institute grants students with a university degree certain exemptions as to years of practical experience required and the number of examinations to be taken.

New York State requires that the college degree be received from a school accredited by them for this purpose. In addition to the degree the applicant must have completed successfully a certain number of semester hours in liberal arts (48), accounting (24), business law (8), finance (8), economics (6), other business subjects (14), and electives (12)—a total of 120 semester hours. If the prospective C.P.A. does not meet these requirements, he can attend an accredited university to make up his deficiencies.

Both Illinois and California require some college education while Alabama only requires enough high school credits to gain admittance to the School of Commerce and Business Administration at the University of Alabama without examination. At the present time Illinois requires, in addition to a high school diploma, thirty semester hours (equivalent to one year of full-time study) of credits in the study of accounting, business law, economics, and finance with at least twenty of the thirty hours being in accounting subjects, while California requires that the high school graduate also complete a "two-years' course of study of college grade." Although Illinois only requires thirty semester hours of college study now, its educational requirements are being raised and after January 1, 1964, 120 semester hours of the same or additional subjects will be required of which at least twenty-

seven hours shall be in accounting, auditing, and business law provided that not more than six of these twenty-seven hours shall be in business law.

Comparison of courses to be taken while gaining practical experience

The Canadian boy, in order to qualify for the chartered accountant's examination, must complete correspondence courses offered by the Provincial Institute while he is gaining his practical experience. No similar requirement is in effect in the United States. It might be pointed out here that an accounting firm may not exceed a ratio of three students-in-accounts to each chartered accountant in its office or offices. No similar restrictions are in effect in the United States. Of course, generally accepted auditing standards require that there be proper supervision of the audit engagement.

These correspondence courses have been established by the Provincial Institute to assist students in obtaining the technical education required by a chartered accountant and complement the practical experience he gains in his day to day work. There are five yearly courses, one for each year of experience a Grade XIII candidate must serve. Qualified university graduates have reduced requirements which will be mentioned later under experience requirements. The first year course is intended to prepare the student for the primary examinations, the second and third year courses for the intermediate examinations, and the last two years for the final examinations. Each course is divided into twenty-six lessons and must be submitted according to schedule during a period of forty-two weeks. The student's progress is reported to his employer.

The students pay a fee each year for the course of instruction which covers the necessary textbooks, a subscription to *The Canadian Chartered Accountant*, and the marking of lessons by practicing chartered accountants. A review of the text material for 1958–1959 indicated that several books familiar to American accounting students are used starting in the third year. At this time they use Finney and Miller's *Principles of Accounting*, both *Intermediate* and *Advanced*, as well as *Montgomery's Auditing*. A one-year subscription to *The Journal of Accountancy* is included in both the fourth and fifth years. Also included in the fifth year are *Financial Accounting* by May, *Introduction to Corporate Accounting Standards* by Paton and Littleton, *Accounting Research Bulletin No. 43*, and *Codification of Statements on Auditing Procedures*.

Comparison of experience requirements

The practical experience requirements for the prospective C.P.A. or C.A. vary between jurisdictions and even within the same state or province depending upon the candidate's formal education. At the present time, all states included in our sample except Illinois require some experience before the certificate is awarded, although California does not require any prior to the taking of the examination. In Illinois a person can become a C.P.A. without any practical experience, but he cannot obtain a license to practice public accounting in his own name until he has had at least three years' experience on the staff of practicing C.P.A.'s or practicing public accountants. This experience requirement may be reduced to two years if the applicant has successfully completed two years of study in a college or university. The Commission on Standards did not recommend the continuance of the practical experience requirements, other than a three-month internship program during the year of postgraduate study, but the Council of the AICPA in its "Resolutions

on Education and Experience of C.P.A.'s" resolved "that an experience requirement be retained."

As indicated previously, the Grade XIII student in Ontario must gain five years of practical experience with a practicing chartered accountant. The five years of experience can be reduced if one is a college graduate. A graduate of a university approved by the Council of the Provincial Institute or its equivalent is assumed to have at least the minimum educational requirements outlined above. The graduate may compress the first and second year courses of study into one year and is exempt from one year of practical experience. However, he must pass the primary examinations. In other words, he may reduce his experience requirements to four years but he must still take all three levels of examinations. An "honours graduate" may further accelerate his studies providing he is successful in the primary examinations by the end of the combined first and second year course. If so successful, he may complete the third year course and half of the fourth year in one year and, providing he is successful in his first attempt at the intermediate examinations, he may complete the remaining half of the fourth year and the fifth year course in one year. In effect, this reduces his studies and practical experience requirements to three years, but the examination requirements are not reduced. A graduate with a Bachelor of Commerce degree (generally known as a B.Com.) is exempt from taking the first two courses of instruction and two years of experience. He is also excused from the primary and economics examinations. The other university graduates are exempted from the economics examination providing they have had adequate courses in economics at the university. From this it can be seen that the minimum experience is three years, the same as in New York.

The candidate in New York State must obtain three years' experience before he is eligible to complete taking the C.P.A. examination (accounting theory and business law may be taken as soon as the educational requirements have been fulfilled), while in the case of California the length of experience required not only depends upon the amount of formal education but also upon the type of practical experience gained by the candidate. For example, the candidate who has passed the C.P.A. examination may receive the C.P.A. certificate upon completion of any one of the following:

1. Three years public accounting experience of which two years must be with a C.P.A. firm.
2. Three and one-half years public accounting experience of which one year must be with a C.P.A. firm.
3. Four years public accounting experience.
4. Private or governmental accounting or auditing work considered equivalent to one of the above.

These experience requirements may be reduced by one year if the applicant has graduated from college with thirty or more semester hours of credit in accounting, business law, economics, and finance, of which at least twenty hours must be in accounting.

Comparison of examinations

Here in the United States we use the Uniform C.P.A. examination which takes nineteen and one-half hours of the candidate's time providing he is successful on the first try. The examination is broken down into four categories: commercial law, accounting theory, auditing, and accounting practice. In New York a candidate may take law and theory as soon as he has his college degree and has met the educational requirements, but he must pass both of them at the same time in order to obtain credit toward the C.P.A.

certificate. Auditing and practice cannot be taken until the practical experience requirement of three years has been met. Here the candidate gets credit for the one he passes and he does not have to pass both of them at the same sitting. A candidate failing any subject four successive times is not eligible for admission to any subject in the two succeeding examinations but he is never completely "washed out" because of failure.

The other three states have varying requirements for taking the C.P.A. examination. As mentioned previously, both Illinois and California permit the applicant to take the complete examination as soon as the educational requirements have been met, while Alabama permits the taking of the complete examination after two years of experience. In all three cases the applicant need not pass all four parts to obtain some credit. For example, in Alabama a candidate who passes two subjects or accounting practice only need not be re-examined in the subjects passed. Both California and Illinois have similar provisions in their regulations except that they have a limit on the time in which the candidate must pass the failed subjects before starting anew. The Illinois provisions also require that two subjects be passed and the failing grades not be below specified percentages, depending upon the subjects passed.

As indicated earlier, the Canadian examinations consist of a primary examination taken at the end of the first year, an intermediate examination taken at the completion of the third year, and a final examination at the end of the fifth year. In addition there is an economics examination. Of course, the B.Com. graduate has to take only the intermediate and final examinations at the end of his first and third years of study and experience. The Canadian examinations are more time consuming than the American one. The primary examination consists of two parts of accounting of three hours each, three hours of auditing, and three hours of mercantile and statute law, a total of twelve hours. The intermediate examination consists of two parts of auditing of four hours each, two parts of accounting of four hours each, and three hours of law for a total of nineteen hours. The final examination consists of three parts each of auditing and accounting of four hours each or a total of twenty-four hours. This plus two hours for economics makes a grand total of fifty-seven hours; even a B.Com. graduate in Canada must undertake forty-three hours of examinations. This minimum of forty-three hours compares with our nineteen and one-half hours.

In both the primary and intermediate examinations the student must pass all subjects in order to obtain credit for passing the examination. A student who is unsuccessful in two primary examinations or three intermediate examinations ceases to be a student-in-accounts and is not eligible for reinstatement without the consent of the Council of the Provincial Institute, which is understood to be difficult to obtain. In the final examinations a candidate does not have to pass both accounting and auditing at the same time provided he passes one and obtains two-thirds of a passing mark in the other. In this case he is given the privilege of rewriting the failing paper only at the next three succeeding examinations. After that if he has been unsuccessful he must take both parts again.

A perfunctory review of questions used in a recent examination indicates that the questions used in the two countries are comparable, but it is impossible to compare the strictness of the grading. The minimum grade in Ontario is generally 60 marks out of 100 marks in each subject, but in the final examination each "paper" contains a possible 100 marks (300 marks

(Ontario), Four U. S. States, and the Commission's Recommendations

	Ontario	*New York*	*Illinois*	*California*	*Alabama*	*Long-term recommendation of the Commission on Standards of Education and Experience for CPAs*
Minimum formal educational requirements	Grade XIII standing in eight papers, three of which are required (English literature, English composition, and algebra)	College degree from accredited school with at least 120 semester hours of credit as follows: Liberal arts —48 Accounting —24 Business Law — 8 Finance — 8 Economics — 6 Other business subjects—14 Electives —12	High school diploma plus thirty semester hours of college credit in the study of accounting, business law, economics, and finance, with at least twenty hours in accounting	Completion of a four-year high school course which included three years of English and two years study at the college level	Sufficient education to be entitled to enter the School of Commerce and Business Administration of the University of Alabama without examination. Such admission requires completion of fifteen units of high school work, of which three must be in English, two in mathematics, and one in history	Postgraduate professional accounting study of one year after completion of four years of college
Experience requirements	Varies from five years to three years depending upon formal education	Three years	None for awarding of certificate, but varies from three years to one year, depending upon formal education, for license to practice	Varies from four years to two years depending upon type of public accounting experience and formal education	Two years	None, other than three months internship with C.P.A. firm during year of postgraduate study
Correspondence courses taken while gaining experience	Five yearly courses, accelerated to agree with experience requirements if necessary	None	None	None	None	None
Length of examinations	Varies from fifty-seven hours to forty-three hours depending upon formal education	The uniform C.P.A. examination—nineteen and one-half hours	The uniform C.P.A. examination—nineteen and one-half hours	The uniform C.P.A. examination—ninteteen and one-half hours	The uniform C.P.A. examination—nineteen and one-half hours	The uniform C.P.A. examination—nineteen and one-half hours

for each subject) and the minimum passing grade is 180 marks in each subject. In the United States the passing mark in each subject is 75 per cent.

Conclusion

One of the significant differences between minimum formal educational requirements in three of our four selected states and in Ontario is the requirement of some college courses in the United States. The Ontario Institute requires only a Grade XIII diploma and a university graduate may obtain exemptions reducing his examination and experience requirements. Although a New York candidate must complete three years of practical experience before completing the C.P.A. examination, a Canadian applicant may be required to complete up to five years of practical experience. Of course, the Canadian B.Com. graduate is on a par with the New Yorker in that he only needs three years of experience. Both New York and Ontario require more experience of the college graduate than Illinois (none) and California (2 years). Canadian young men must also complete additional courses of study during this time. Finally, the American examination requires only nineteen and one-half hours to the Canadian minimum of forty-three hours. The question may thus arise: Should we in the United States consider raising our requirements to increase the minimum examination hours?

ACCOUNTING PROBLEMS WARRANTING ADDITIONAL RESEARCH

DAVID R. DILLEY
U. S. Steel Corporation

SEVERAL years ago it became apparent to the writer that graduate students and other researchers at times have difficulty in determining accounting research projects of practical value. Most business enterprises, on the other hand, are very much aware of a large number of accounting problems warranting additional research. Because of these factors, it was felt that a comprehensive presentation of current accounting problems warranting additional research probably would be of value both to business organizations and to prospective researchers.

The Survey

In an attempt to provide a guide to prospective researchers as to which accounting and financial problems are of greatest current importance to industry, the writer surveyed the controllers or other chief financial officers of the eighty corporations which in 1957 derived at least half their total revenues from manufacturing or mining and which had sales of more than $500 million. These eighty corporations had sales in 1957 of more than $116 billion, total assets net of depreciation and depletion of more than $93 billion, and operations in virtually every major industry in the country.

The letter sent to the chief financial officer of each of these eighty industrial corporations asked for a listing and brief description of the research projects which he felt would be of interest to industry in general as well as those of greatest current interest to his specific company or accounting organization. The prospective respondents were told that the identity of their responses would be kept confidential. In cases in which no response was received from the original letter, a follow-up letter was sent and direct telephone requests were made in cases where it was expedient to do so.

Results of the Survey

The exhibit on page 290 indicates the general problem areas warranting additional research, together with the frequency with which each problem area was mentioned by the companies within each industry. The first line indicates the distribution by industry of the eighty companies surveyed. The line immediately below indicates the number of companies within each industry which furnished information. As indicated by the exhibit, responses containing useful information were received from forty-four of the eighty corporations surveyed, including all the companies in the food and dairy, soap and toiletries, office equipment, and tobacco industries. Twenty-four of the forty-four respondents submitted quite detailed descriptions of what they feel are the current problems, why they are problems, and in some cases the benefits to be realized by solving these problems. Thirty-six of the forty-four responses were obtained directly from a top level financial executive (controller, assistant controller, vice president, or treasurer) and a number of these volunteered their personal opinions that the survey should be of value both to industry and to prospective researchers.

The general problem areas mentioned by the respondents are listed below the double line in the exhibit. In several in-

stances, problems were mentioned which conceivably could be classified in either of two problem areas; in these cases, the problem was listed only once. Likewise, in a large number of cases, two or more specific problems were mentioned by a respondent within one general problem area. The schedule recognizes only one listing of each problem area by each respondent.

A total of 191 problems warranting additional research were mentioned by the respondents. The three most frequently mentioned problem areas (depreciation and inflation, data processing, and internal reports and communication) each were listed a total of seventeen times or more and accounted for approximately thirty per cent of the total responses. The topics mentioned more than twice by the respondents were concentrated within twenty-five categories and accounted for almost ninety per cent of the total responses. The quantity of research problems suggested by the various respondents ranged from a low of only one project in the case of one respondent to a high of twelve projects in the case of another. The average number of research projects listed was between four and five. The degree of detail given by the respondents also varied considerably.

Although the respondents were told that the problem areas which they mentioned did not necessarily have to be ones of interest to their own organization, from comments in their letters it appears to be a rare exception when a problem was mentioned that was not of concern to the particular respondent or his organization.

In interpreting the frequency of responses, it should be recognized that a check-list type of questionnaire mentioning each of the problem areas would undoubtedly yield a higher number of responses for most if not all problem areas. However, it was felt that the questionnaire actually used would elicit responses about those problem areas which are of greatest concern to the respondents. Further, each respondent had the opportunity to elaborate on the problems mentioned. This elaboration was most helpful in preparing the discussion of the specific problem areas which follows.

Depreciation and Inflation

The most frequently mentioned problem was that of inflation and its effects on depreciation charges of companies. This topic was mentioned for additional research by twenty-one, or approximately fifty per cent, of the forty-four chief financial officers of industrial corporations with 1957 sales in excess of $500 million. Many respondents believe that it is an extremely serious financial problem and one which adversely affects the overwhelming majority of American businesses.

In reviewing the statements about the inadequacy of present depreciation provisions, the writer also gained the impression that industry in general feels a certain sense of urgency in arriving at a solution; this urgency was not apparent in the responses on any other subject.

Judging from the responses, the problem of depreciation and inflation appears to be of great concern to companies in virtually every industry. Although this problem was mentioned frequently by both the larger and smaller companies surveyed, a slightly greater response was received from the latter group.

The statements on this subject were almost evenly distributed between the problem of how to obtain the legislative changes necessary to halt the taxation of business capital which is presently occurring and the problem of how to account for and present price level changes in financial statements.

The following statements by two respondents tend to indicate the general

ACCOUNTING AND FINANCIAL PROBLEMS WARRANTING ADDITIONAL RESEARCH, AS DETERMINED BY SURVEY OF COMPTROLLERS OF EIGHTY LARGEST INDUSTRIAL CORPORATIONS*

General Area of Problem	Frequency With Which Problem Area Was Mentioned By Each Industry†													
	Petroleum	*Food & Dairy*	*Chemical*	*Soap & Toiletries*	*Elec. Equip.*	*Steel*	*Aircraft*	*Office Equip.*	*Rubber*	*Non-Ferrous Metals*	*Auto-motive*	*Tobacco*	*All Other*	*Total*
Number of Companies Surveyed	15	5	9	2	6	8	8	2	4	4	3	2	12	80
Number of Companies Responding	9	5	7	2	3	4	2	2	2	2	1	2	3	44
Depreciation and Inflation	3	1	4	1	3	3	1	1	1		1		2	21
Data Processing	3	2	5	1	2	2	1			1			1	18
Internal Reports and Communication	2	3	2	2		1	2	1	1	2			1	17
Education and Training	2	1	3			2				2		1		11
Income Determination	1	1		1	2		2	1			1		1	10
Allocation of Overhead	3	1	1	1			1						1	8
Intra-Company Pricing	1	1	2		1		1	1						7
Evaluation of Financial Performance		3	1	1									1	6
Foreign Operations	1	1			1			1			1		1	6
Inventory Pricing and Valuation	1		1		1			1	1				1	6
Cost Accounting-Miscellaneous Problems	1	1	1		1	1			1					6
Budgeting and Forecasting			2			1	1		1				1	6
Procedures	1			2		1					1			5
Organization		2					1						1	4
Appropriation Evaluation							1	1	1				1	4
Compensation		1		1	1	2								4
Income Tax Allocation	1	1			1						1			4
Management of Records	1	1		1									1	4
Joint Product Costing	4													4
Taxation		1								1			1	3
Cost Analysis	1	1										1		3
Internal Auditing and Control				1							1		1	3
Economic Data	1	1	1											3
Reports Required by Government			1	1	1									3
Productivity					1	1								2
Operations Research	1		1											2
Personnel Evaluation	2													2
Accounting Period		1											1	2
Costs of Accounting				1									1	2
Sales Accounting					1								1	2
Pensions	1											1		2
Capital Structure				1			1							2
Consolidations	1				1									2
All Other Problem Areas	2	2	1	2										7
Total No. Problem Areas Mentioned	34	26	26	17	16	14	12	7	6	6	6	3	18	191

* Eighty largest industrial corporations were determined on basis of 1957 sales.
† In a large number of cases, two or more specific problems were mentioned by a respondent within one general problem area. This exhibit recognizes only one listing of each problem area by each respondent.

feeling on this subject. "In my opinion the most critical problem facing our company as well as industry in general is obtaining an allowance for tax purposes of an amount for depreciation, amortization, etc. which is sufficient to replace worn out and obsolete plant and equipment. At the present time with an income tax rate of 52%, a substantial portion of earnings after payment of even a modest dividend has to be used to replace old equipment and thus just stay even." Another respondent stated "Even if badly needed tax reform is not obtained for several years, there needs to be additional writing and research on how financial data are to be adjusted for changes in the price level. Procedures need to be developed which will make such adjustments practicable for the average company and also the resulting financial statements easily understandable to the average reader."

Data Processing

Eighteen of the forty-four respondents listed the subject of data processing as warranting additional research. This subject was mentioned by companies in every industry covered, except for automobiles and office equipment. Although the latter industry undoubtedly has full understanding of the subject of data processing, it probably also has most to gain from additional research on the subject.

Responses on this subject were concentrated in two major areas. First, in what ways can electronic data processing be applied profitably to the accounting function? Second, how should a company go about making an economic evaluation of a proposed or actual installation? Specific problems mentioned in these areas included the following: relative costs and advantages of large centralized computers versus small decentralized installations; what functions to convert to electronic data processing and how and when to convert them; how best to apply electronic data processing in small companies; and the determination of whether dollar savings are the only criteria for evaluating data processing systems.

Each of the following topics was also mentioned by either one or two respondents: How are the data processing systems to be audited? What changes in organization result from electronic data processing, and what should be done with the displaced personnel? What can be done to insure more training in electronic data processing by colleges of business administration?

Internal Reports and Communication

Seventeen of the respondents suggested topics concerned with internal reports and communication. The respondents who mentioned this general area also represented virtually every industry and were quite evenly distributed by size among the eighty companies surveyed.

It is very significant that fourteen of the seventeen respondents indicated the desirability of additional research on how best to report data to top management. Most of these respondents were primarily concerned with learning what types of information top management wants as a basis for making decisions rather than with the form of presentation. This involves not only the problem of summarizing masses of accounting data, but also the problem of developing key measures and relationships from the summarized data. Closely related is the question of how to put into effect the principle of "management by exception" throughout the accounting organization.

Other questions related to internal reports and communication included the following, each of which was mentioned by two respondents: How can more current reporting at reasonable cost be achieved in an organization? What are the most de-

sirable methods of communication in an accounting organization? How can the values of the accounting department best be communicated to non-accounting functions? How can the effectiveness of an accounting report program be evaluated?

Education and Training

Questions related to education and training were mentioned by twenty-five per cent of the respondents. With only one exception, all respondents who listed this topic for additional research were companies which ranked in size among the lowest half of those surveyed; this would tend to indicate that the larger companies may be more satisfied with their present education and training programs.

By far the most frequently listed problem concerned how to develop executives for greater leadership responsibility. With respect to this topic, respondents indicated an interest both in knowing what industry can do to obtain better trained accounting and financial personnel and in knowing the essentials of a good executive development program.

Three companies expressed interest in additional writing and research aimed at improving the early industrial training and orientation of the college graduate so that his transition into industry can be faster and more effective. One of these respondents stated that he had researched the accounting literature of the last five years and could find no articles containing guideposts for beginning accounting trainees and that such an article should be of interest not only to employers but to college students and industrial trainees as well.

Three somewhat related topics were each mentioned by two respondents: how to train personnel for better financial and cost analysis; how to train young industrial employees to communicate more effectively; and how and whether to improve college curricula to meet the needs of the business world more completely.

A final topic concerned how to motivate and train clerical accounting personnel better so that supervisory personnel will have more time available for thinking about the non-routine aspects of their functions.

Income Recognition

Numerous specific problems related to income recognition were mentioned by ten respondents who listed this general problem area. The most frequently mentioned specific problem involved the justification and treatment of differences between "book" and taxable income. A closely related problem concerns whether an accrual for deferred income taxes arising from accelerated depreciation properly reflects income. Another related subject is whether depreciation practices allocate costs to proper accounting periods.

Two other problems of income recognition were each mentioned once: procedures for accounting for deposits received for durable containers sold, and the effects of unrecorded long-term lease commitments on the measurement of income.

Allocation of Overhead

This problem involves identifying and classifying the various types of overhead costs into such areas as general company overhead, departmental administrative overhead, internally generated departmental overhead, and charges from staff departments. It also involves allocating these expenses on an appropriate basis to the functions benefited. One respondent stated a closely related problem of "allocating general and administrative expense to operating departments organized along functional lines such as exploitation of natural resources, manufacturing, transportation, and marketing, when the opera-

tions do not provide a common base that is representative of the benefits received by each function."

Intra-Company Pricing

Additional research on methods of costing product transfers between separate units of a multiplant company was mentioned by seven different companies. The specific statements and questions listed included the following: What are the intra-company pricing policies in different industries, and what is the justification for each method employed? Which pricing policies permit the best evaluation of profit results? What constitutes the proper transfer price for products which cannot be purchased on the open market? How should a company arrive at "make or buy" decisions for products that could either be produced by one of its divisions or purchased from the outside?

Evaluation of Financial Performance

Three specific problem areas related to evaluation of financial performance were mentioned by the companies surveyed: first, evaluating financial performance of separate and/or decentralized units. One company listed a number of specific questions to be considered: "In evaluating performance in relation to investment, what assets should be included in the investment? Should asset cost be original cost, depreciated cost, or replacement value? Should the investment include purchased intangibles, the intangible value of past advertising and sales effort, start up losses of new ventures? For purposes of relating division profits to investment, should the former include, for example, general overhead over which the division general manager may exercise little, if any, control?

The second specific area mentioned concerned development of methods to evaluate performance in non-manufacturing functions such as advertising, market research, distribution, and theoretical and applied research. The third area involves determination of what the key financial measures are for a company being considered for acquisition or merger so that a proper price may be established. Each of these specific areas was mentioned three times.

Foreign Operations

Five of the six respondents who mentioned problems connected with foreign operations felt that problems related to the recognition of income from foreign operations were particularly significant. Specific questions included the following:

When should foreign branches or affiliates be included in parent company consolidated statements? If foreign operations are not included in the consolidated statements, when should constructive receipt of foreign earnings be recognized, especially where local earnings are reinvested in plant expansion at the foreign location? What is the current practice with respect to consolidation of foreign subsidiaries?

Three companies also mentioned the question of how to account for changes in valuation of foreign currencies. What should be the treatment of consolidating exchange adjustments for income tax purposes? How should such adjustments be recorded in the accounts?

One company mentioned the desirability of a comprehensive presentation of the financial problems connected with overseas expansion, including foreign taxes, remittance and dividend regulations, desirability of holding companies, impact of American antitrust laws, and borrowing for such expansion.

Inventory Pricing and Valuation

Three companies mentioned problems connected with the LIFO method of in-

ventory valuation: its current advantages and disadvantages; how to select the optimum number of inventory pools; whether the use of LIFO for federal income tax purposes stimulates year-end buying to protect the right to carry inventory at lower prices. Two other companies mentioned the desirability of a study of the probable effects of various inventory valuation methods on current and future income of corporations. Another company suggested further research to determine additional time-saving methods of physical inventory taking such as by statistical sampling, or applications thereof.

Cost Accounting—Miscellaneous Problems

Six respondents mentioned cost accounting subjects other than allocation of overhead and joint product costing. Their questions included the following: How can a company exercise the same degree of control over distribution costs as over production costs? How and why do concepts of costs for management control differ from those used for inventory valuation? How can a company determine what constitutes the most profitable degree of cost control? How can a company appraise the effectiveness of its standard cost system? Should depreciation be continued beyond the point where a property becomes fully depreciated in order to have a depreciation factor in product cost?

Budgeting and Forecasting

Three respondents expressed interest in the development of concepts and techniques of better budgetary control over research, engineering, and legal costs; they indicated that at least for their companies these areas at present are difficult to control effectively. Two respondents mentioned the need for further refinement of forecasting techniques for balance sheet and profit and loss items. Another indicated an interest in the development of criteria to appraise the effectiveness of budgetary control within the operating units of a multi-operation company.

Procedures

Although five companies mentioned research projects concerning accounting procedures, there was little duplication among the topics suggested. A research topic which could significantly increase the productivity within the accounting function was "how can accounting documents which flow from one company to another (e.g. seller to buyer) be in such form that these documents (e.g. invoices) can be introduced directly into accounting machines?"

Other suggested research topics included the following: How can paper work be simplified? When and how should management consultants be utilized in designing accounting systems and procedures? What is the most practical method of setting forth delegations of authority within a large organization so that all personnel will know whether a transaction is properly authorized? How can the university curriculum be improved in systems and procedure education?

Organization

Of the four companies which mentioned research problems involving organization, two are in the food and dairy industry. Two companies were interested in learning the pros and cons of centralization vs. decentralization of the accounting function and also in learning the typical national practice. Other questions included the following: What, if any, changes in organization are necessary because of the installation of electronic data processing machines? What factors determine the proper organization alignment of the controller's function in relation to those of production and sales?

Appropriation Evaluation

Five possible research problems on appropriation evaluation were mentioned by four companies. What are the methods most frequently used for determining investment advisability? Does the frequency of method vary significantly among different industries and, if so, why? Which method or methods of determining investment advisability result in the best management decisions over a long period of time? Can standards for measuring the adequacy of return on investment be determined and, if so, should these standards vary among divisions or individual capital expenditures made by a company? Should investment desirability decisions recognize the replacement cost of plant and equipment and, if so, what would be the effects of doing so?

Compensation

Four different companies mentioned questions about compensation, of which two were steel companies. How and to what degree are the various levels of industrial accounting personnel compensated? To what extent does compensation for similar accounting functions vary among industries? For accounting trainees, what constitutes a proper rate of pay, how frequently should increases be granted, how large should salary increases be, and on what factors should the trainee's salary increases be based?

What is the most effective way to determine the need for sales and production incentives, and how should the effectiveness of these incentives be measured once they are installed?

Income Tax Allocation

The respondents who suggested research on tax allocation were approximately equally distributed by size among the companies surveyed. The following are the specific questions suggested: Is it proper and practicable in all instances to recognize deferred tax benefits? What are the current practices in this connection? How should income taxes determined on a consolidated basis be allocated to operating units comprising the consolidation when some of the units sustain losses?

Management of Records

Companies which mentioned management of records were all among the smallest of the companies surveyed. Four rather diverse questions in this general area were mentioned, as follows: What are the criteria of an optimum records program? How much does and should a records retention program cost? What are the merits of microfilming records for disaster purposes and for space conservation? What accounting records produced by electronic computers can and should be retained?

Joint Product Costing

As indicated by the exhibit, page 290, the four respondents who mentioned joint product costing are in the petroleum industry. One respondent stated, "I am sure that you can appreciate the importance of the problem of joint product costing to a refiner when you consider that hundreds of products are made from the same raw material and that the semi-processed material produced by one process can be diverted into a number of different channels for further processing. Additionally, completion of one stage in the over-all process will produce quantities of several finished products as well as a number of different streams which must in turn be reprocessed."

Three petroleum companies mentioned the problem of segregation of exploration, development, and production costs between oil and gas and the allocation of raw material costs to finished products in the petroleum industry. One of these compa-

nies also mentioned the problem of determining a fair rate of return for producers of natural gas.

A closely related suggestion was to survey the methods imposed or accepted by various regulatory agencies of government for allocating common costs to specific products or service and to evaluate the propriety of such methods.

Taxation

As with a number of other general areas of problems, the content of specific questions mentioned varied quite widely, as can be seen from the following: "How may the business fraternity best go about obtaining a true overhaul, on a long-term basis, of our systems of taxation?" What can corporations do to reduce the tax burden of their management personnel? How large is the total tax bill for industry, and how does it vary as between industries? What part of the selling price of manufactured products is a recovery of taxes?

Cost Analysis

The respondents listing problems in the area of cost analysis were all among the smallest of the eighty companies surveyed. All three of the companies mentioned the problem of determining and utilizing the most advanced analytical and interpretive techniques. One comptroller stated that in his opinion "we have too few accountants who are truly skilled in this area since for many years the tendency has been to place emphasis on the compilation of data before the assigned deadlines." Other problems mentioned included how to identify the areas where additional cost analysis will "pay" and how to report and analyze maintenance costs effectively.

Internal Auditing and Control

Two companies mentioned the desirability of developing a concise, practical check list of important areas of internal control which could be published and issued to the controllers of small corporations or to the plant controllers of a multi-plant corporation. Another company was interested in what auditing procedures have been or should be established for the audit of company functions performed by electronic computers.

Economic Data

Three companies listed questions in the general area of economics: What are the latest methods which have been determined for applying economic data to specific company functions? How can the economic cost and value of cash to a business organization be determined? What specific functions should be performed by an economic analysis group?

Reports Required by Government

Four subjects concerning reports required by government were received from three companies, as follows: In what ways can the paper work burden of company reports to local, state, and Federal governments be reduced? Can reports be designed to permit their use both for Federal and state uses? Can wage reports be made uniform for all states? Could a study be made of the reporting requirements of the Securities and Exchange Commission, with the view towards streamlining, discontinuing, or reducing the frequency of these required reports?

Productivity

In view of the emphasis which industry is currently placing on the subject of productivity and its relation to wage agreements, it was rather surprising that only two companies mentioned this subject. This may have resulted because the respondents did not consider productivity as strictly a financial or accounting subject. These are the three questions which were

mentioned by two companies. What is the concept of productivity in the national economy as well as for an individual company? Can productivity be measured accurately and fairly and, if so, how? What legitimate uses can be made of productivity figures?

Operations Research

Two respondents listed questions in the area of operations research. What specific techniques in operations research may be profitably utilized by the controller's organization? How best can a company initiate an operations research program?

Personnel Evaluation

Personnel evaluation and measurement were mentioned twice. How can the accounting department evaluate non-technical personnel prior to employment and how should their performance be evaluated when and if they become employes? How can effective work measurement standards be developed for accounting and clerical activities?

Accounting Period

The following questions about accounting periods were listed. Is a month or a year really a significant time period for profit measurement? What are the advantages and disadvantages of accounting on a fiscal year basis versus a calendar basis?

Costs of Accounting

Costs of accounting services were listed as research topics by two respondents. How can reasonable cost standards be developed for the function of maintaining accounting records? How much of the sales dollar goes for accounting services, and to what extent does it vary among companies and industries?

Sales Accounting

The two questions involving sales accounting each involved a number of separate aspects. What are the generally accepted methods of recognizing trade and cash discounts, excise taxes, and oil royalties to foreign governments? What should be the amount credited to sales when allowances for advertising, sales promotion, and selling expenses are granted to the purchaser; also, what should be the amount when portions of the job are subcontracted?

Pension Costs

Pension questions were mentioned by two companies. What methods of accumulating funds are presently being used by American corporations, and what are the advantages and limitations of each method? What are the current practices of accounting for pension costs?

Capital Structure

Following are the questions mentioned about capital structure: How can the optimum capital structure for a corporation be determined? What are the out-of-the-ordinary methods for raising capital which may be appropriate for a company under various circumstances?

Consolidations

Consolidations were the subject of two questions. "What justification, if any, exists for including 50% of all balance sheet and profit and loss items of a company with half its stock owned by each of two other companies?" What advantages, if any, are there to publication of financial information about the major individual operating units?

Miscellaneous Problems

In addition to the problem areas discussed above, seven other questions were each mentioned once. These included the following subjects: how to manage financial innovations; how to simplify account-

ing for credit and collections; how to organize and operate a long-range financial planning function; how to account for sale and lease back transactions; how to recognize reductions in the value of goodwill on the books; and the possibility and desirability of codifying accounting conventions and principles.

Conclusion

The industrial accounting executives surveyed feel that a number of problem areas warrant additional research. Judging by the frequency with which approximately a dozen problem areas were mentioned, there also appears to be considerable agreement as to which areas warrant additional research.

The majority of problems mentioned were in the area which may be described as practical or applied research rather than in what may be termed basic research. Although research of the latter type is a necessity in any field, attention in a practical field such as accounting also needs to be given to applied research problems such as those mentioned by the respondents.

Although some of the problem areas mentioned by industrial accounting executives may not be appropriate for every researcher, it is felt that the listings are comprehensive enough to include problems of interest to virtually every type and level of researcher.

ABSTRACTS OF DISSERTATIONS IN ACCOUNTING

Collected by
JAMES S. SCHINDLER
Chairman, Committee on Research Review

ABSTRACTS of doctoral dissertations in accounting are published periodically in THE ACCOUNTING REVIEW for the information of its readers. The last prior publication of these abstracts appeared in the October, 1959 issue. Each abstract briefly summarizes the nature of the problem explored and usually presents findings or conclusions. It is suggested that interested persons write directly to the author for more specific information or further expression of ideas respecting the subject. A copy of the complete dissertation may often be procured for study through interlibrary loan.

A STUDY OF THE NATURE AND DEVELOPMENT OF AUDITING STANDARDS IN THE UNITED STATES

Abdel-Moneim
Mahmoud Abdel-Moneim
University of Illinois, 1958

This thesis is both a historical study of the development of generally accepted auditing standards by the public accountancy profession in the United States and a critical study of presently accepted standards leading to recommendations for future modification and development of auditing standards.

The historical portion is devoted to a review of the antecedents of the *Tentative Statement of Auditing Standards* published by the American Institute of Certified Public Accountants in 1947. In this portion of the study, the following publications are examined with major emphasis on the course of events that led to the issuance of each and its influence on the development of auditing standards:

1. *Uniform Accounting* issued by the Federal Reserve Board in 1917.
2. *Approved Methods for the Preparation of Balance Sheet Statements* issued by the Federal Reserve Board in 1918.
3. *Verification of Financial Statements* issued by the Federal Reserve Board in 1929.
4. *Audits of Corporate Accounts* issued by the American Institute of Certified Public Accountants in 1934.
5. *Examination of Financial Statements by Independent Public Accountants* issued by the American Institute of Certified Public Accountants in 1936.
6. *Extensions of Auditing Procedure* issued by the American Institute of Certified Public Accountants in 1939.
7. *Statements on Auditing Procedure* issued by the American Institute of Certified Public Accountants from 1939 to date.
8. *Tentative Statement of Auditing Standards* issued by the American Institute of Certified Public Accountants in 1947.
9. *Case Studies on Auditing Procedure* issued by the American Institute of Certified Public Accountants from 1947 to date.
10. *Generally Accepted Auditing Standards* issued by the American Institute of Certified Public Accountants in 1954.

The second part of the study is concerned with the nature and development of individual auditing standards. In this portion of the study, the present generally accepted auditing standards are examined with the following objectives in mind:

1. To trace the historical development of these standards individually.
2. To see how adequate they are as realistic guides in professional practice.
3. To indicate some of the problems involved in their application.
4. To indicate, insofar as possible, the probable future trend in continuing development of auditing standards.
5. To suggest areas that need further development and improvements.

Conclusions

The following conclusions appear justified:

1. Although the term "auditing standards" is a comparatively recent one in accounting literature, the public accountancy profession has had informal standards for many years. These have long been inherent in the writings of authorities and in the practice of professional accountants.

2. Present accepted auditing standards, as stated, are such vague generalities that their adequacy as real guides to action and their effectiveness in raising the level of professional performance are questionable.

3. If auditing standards are to strenthen public confidence in the work of public accountants and make a real contribution towards raising the level of professional performance, present auditing standards should be modified, expanded, and restated in a more definite and precise manner.

4. There are strong indications in the professional literature of the last few years that auditing standards can and should be developed in more detailed and specific terms.

5. The best interests of the profession require that its measures of performance be formally established and expressed in as definite, objective, and precise a manner as possible.

6. More detailed specification of auditing standards need not unduly restrict the traditional freedom of action and judgment so long treasured by professional accountants if the real nature and function of standards are recognized.

THE EFFECTS OF PRICE-LEVEL FLUCTUATION ON ACCOUNTING DATA

Bernard Francis Aschbacher
University of Illinois, 1958

The significance for accounting of a change in dollar purchasing power has not been professionally accepted. In discharging its function, accounting has developed within a definite framework of concepts and standards which impose fundamental limitations on the scope of its service. In periods of changing prices, however, the ability of conventionally derived data to meet the needs of differing users becomes questionable. A substantial portion of the study was devoted to adjustment of the operating data of a selected manufacturing company by application of a general price index. The major purpose here was an evaluation both of the magnitude of differences disclosed and their significance from a standpoint of relative usefulness to various users of accounting data. The conclusions reached hold definite implications for extension of conventional views of the primary accounting function. The magnitude of the differences between adjusted and historical data is material both percentage-wise and in absolute amount. Furthermore, the methodology of adjustment presents no insurmountable obstacle either from the standpoint of competence of non-statistically trained personnel or cost of compilation. It does require information far beyond that made available in customary annual reports. The consequent impossibility of adequate interpretation appears to void the assumption that knowledge by the user that the data presented were derived without regard to dollar instability automatically negates significance for accountants.

For primary managerial purposes, particularly operational planning and control, adjusted data have little value, either because the data themselves play no part in most managerial decisions or because other devices already available serve satisfactorily. Invested cost data, on the other hand, because of their usefulness for purposes of cost control, accountability discharge, and calculation of tax liability, in addition to their wide legal and profes-

sional acceptability, have important application. Claims of a loss in usefulness for the above purposes and the accounting desire to cling to objectivity appear to be justified only with respect to incorporation of adjustments into the accounts or the preparation of reports *only* on an adjusted basis. Accountants have strongly urged full disclosure in reports, particularly where available alternative procedures will produce materially different results. Supplementary information of a price level nature would constitute an additional step in this direction.

For reporting purposes invested cost data have definite shortcomings. The accounting methodology has developed around the needs of individuals and groups for information concerning the activities of the business enterprise. In the past, accounting has recognized the dynamic nature of business and has evidenced both a willingness and an ability to adapt to new requirements. Apparently continued flexibility is necessary. Conventional financial statements are properly directed toward external rather than managerial interests. Today there is increasing recognition by all segments of the economy of the role of the business enterprise as an economic institution charged with responsibility for an equitable allocation of economic resources rather than as a device to maximize a return to selected individuals. For accountants, as the principal source of information concerning business activities and progress, some compulsion exists, both from an ethical and a social standpoint, for acceptance of the responsibility for extending presently held views of the accounting informational function. Even though emphasis is placed on service to management rather than service to society as a whole, this compulsion exists. The most urgent problems facing business today stem from pressures exerted by external interests. Clarification of the true nature of business profits may relieve these pressures by enabling management and ownership to demonstrate wherein government policies and labor demands endanger capital retention or expansion and hinder economic progress in general.

THE DEVELOPMENT AND PRESENT STATUS OF THE ACCOUNTING CONCEPT OF SURPLUS

Billy Lee Barnes
University of Illinois, 1958

Since corporate surplus emerged in the seventeenth century as an integral part of the financial structure of the business corporation, it has undergone a significant evolutionary development. From a simple concept essentially synonymous with business profits at the time of its inception, surplus became so complex that by the mid-point of the twentieth century it was perhaps the most nebulous concept in the field of accountancy. From a relatively insignificant factor in the corporate financial structure, surplus had increased to such magnitude that a nebulous concept was intolerable.

The purpose of this study is (1) to determine the distinctive concepts by which surplus has been viewed during that period; (2) to examine the environments within which the corporation has existed, in an attempt to identify some of the factors, especially those exogenous to accounting, which influenced the changes in the accounting concept of surplus; and (3) on the basis of the findings to present some of the desirable and probable future developments in the area of corporate surplus.

A concept of total capital, adequate for the single venture, was inadequate for the perpetual business enterprise with diverse ownership. The concept of surplus had its genesis in the dichotomy of the concept of total capital into separate concepts of permanent capital and surplus.

Until the latter part of the nineteenth century, a concept of one general surplus, closely related to retained income, was generally accepted. Beginning then, the major developments in surplus included the introduction of surplus reserves, the use of surplus as a material source of financing, and significant progress in income determination. Dividend, reserve, and financing policies indicate an underlying utilization concept of surplus.

As increments other than earnings—such as capital gains, preminum on stock, and unrealized appreciation—made their appearances, accountants at first were content to overlook their divergent natures, and the concept of one general surplus carried over into the twentieth century. The shift from short term to long term financing, the passage of the Revenue Act of 1913, and the introduction of no-par stock, however, introduced elements which made that concept inadequate. Of greater significance was the contribution of academicians and theoreticians in spelling out the nature and function of surplus, and the recognition of a social responsibility by practitioners. Together they directed their efforts toward the correlation of economic reality and legal doctrine into a sound accounting structure.

A multiplicity of heterogeneous items was the basis for much experimentation in surplus classification, and as a result, a source concept was superimposed upon the utilization concept. Separate concepts of earned, capital, and appraisal surplus replaced the general surplus concept. Earned surplus emerged as the major surplus concept and has undergone relatively little change. Capital surplus reflects the effect of the concept of legal capital in disregard of economic reality. Originally it included all surplus except earnings, but currently is restricted to capital contributions by stockholders and others. Appraisal surplus has received support from most businessmen and economists and some accountants. It currently is rarely recognized in practice.

It is recommended that the source concept be applied to the entire stockholders' equity and that there be more complete disclosure relative to the utilization of earned surplus. It is predicted that paid-in surplus will lose its separate identity as the solvency test for legal dividends minimizes the importance of legal capital, and that eventual recognition of unrealized appraisal increments is almost entirely dependent on the trend in the price level.

LEGAL LIABILITY IN PUBLIC ACCOUNTING PRACTICE

Robert Glen Berryman
University of Illinois, 1958

The object of this study is to provide a relatively complete exposition of legal liability in public accounting practice and to review measures which public accountants may appropriately adopt to reduce the risks from this source.

The public accountant who fails to fulfill any duty created by contract or imposed by law with respect to any aspect of an engagement may be subject to legal censure. Clients, third parties, or the state may bring actions against public accountants. The complainant may allege a breach of the contract, commission of a tort, or violation of a statutory duty. The public accountant owes a duty to his client to perform his contracts without negligence or fraud. He is usually responsible to third parties for fraud but not negligence. If the third party is the client's beneficiary or subrogee, or a person suing under the Federal *Securities Act of 1933*, he is responsible for both negligence and fraud. The state may initiate prosecution of accountants when they suspect violations of statutes.

As professional men, public accountants' performance of engagements must be at

least equal in quality to that which is typical in the profession. The public accounting profession must set the standards of performance before the law can enforce them. Not all auditing standards, techniques, or procedures, or accounting doctrines have been reviewed by the courts nor have all the possible applications been the subject of litigation. Those concepts which are generally accepted by the profession can be expected to satisfy the courts if the selections were appropriate in the circumstances and were employed skillfully and carefully. Decided cases seem to indicate trends toward (1) increasing the degree of social responsibility of public accountants, (2) requiring full disclosure, and (3) raising the quality of performance needed to comply with the due care requirement.

In order to reduce the risk of legal liability in his practice the public accountant should be aware of the hazards which exist and the means available to reduce the likelihood and adverse efforts of litigation. In legal actions the public accountant's greatest loss is likely to be that of his reputation. In addition there may be damages awarded by the courts, legal fees, and loss of time.

Before accepting engagements the public accountant should be sure that he is fully qualified to render the services needed and has resources available to perform the work properly. He should investigate prospective clients so as to avoid engagements in which the tendency toward bias or the existence of other risks is likely to be great. Carefully worded written contracts or at least an exchange of letters is preferable to an oral contract.

Emphasis in field work should be placed where legal liability is most likely to occur. Work papers should be reviewed carefully to be sure that suspicions and questions are adequately investigated and explained, compliance with standards of performance has been achieved, and the evidence obtained justifies the report issued.

The accountant's report should be carefully worded so that the exact meanings intended are conveyed. The scope of the work is all that should be reported as representation of fact. The remainder of the usual report should express opinions. Careful report review should assure full disclosure of all relevant facts. Care should be taken to avoid disclosure of confidential information given by the client.

Public accountants should strongly consider carrying professional liability insurance since it can shift a substantial part of the financial risk from legal liability in their professional practice to an insurance company.

DEPRECIATION IN THE STEEL INDUSTRY: A STUDY OF THE PERIOD 1940–1956

Clark E. Chastain
University of Michigan, 1958

The steel industry with fixed assets of over thirteen billion dollars has been faced with the problem of expanding its productive resources during the postwar period of rapidly rising prices. Annual increase in cost of capital assets has been seven per cent since 1940, as measured by the Engineering News Record Index of Construction Cost. It has been stated repeatedly by steel executives, accountants, engineers, economists, and finance experts that depreciation on original cost, as allowed by the Internal Revenue Service for income tax purposes, is insufficient in the aggregate to equal the funds needed to replace worn-out plant and equipment. Recent estimates indicate that depreciation allowances in 1957 were from $300 to $400 million short of capital replacements.

This study surveys depreciation policies and practices of the industry from 1900 to 1957. Corporate annual reports, Moody's

Investor Services, reports of the Securities and Exchange Commission, data made available by the American Iron and Steel Institute, and data obtained by the Brookings Institution in its current study of the steel industry provided basic data. Normal depreciation—capital consumption determined by the straight-line method—is compared with replacement expenditures for 1946–1955. The magnitude of rapid amortization and accelerated depreciation was calculated and implications of its impact examined. Normal depreciation, rapid amortization, and accelerated depreciation are compared with normal depreciation in terms of current dollars.

Certificates of necessity with certified costs of more than three billion dollars have been granted to the steel industry since 1940. In addition one of the several accelerated methods of depreciation authorized by the 1954 Code has been adopted by most companies. Accelerated depreciation had increased the annual depreciation charge by approximately 4.3 per cent in 1956; by 1958 it may provide an increase in the annual charge of $200 million (approximately 50 per cent of normal depreciation for 1956).

Normal depreciation was found to be substantially equal to capital replacements made for 1946–1955 inclusive and total depreciation deducted for income taxes greatly exceeded the cost of plant and equipment replaced during the postwar decade. Normal depreciation was found to equal 57.4 per cent of the purchasing power of the capital consumed, with rapid amortization and accelerated depreciation equal to an additional 29.8 per cent, leaving a net inflationary deficiency in recorded capital consumption of 12.8 per cent from 1940 to 1957.

Three conclusions may be drawn from the findings: (1) Depreciation allowances have proved to be greater in the aggregate in postwar years than cost of replacement, despite the cries of the critics of present depreciation procedures. (2) Depreciation allowances have not been as great in the aggregate as the real cost of capital consumed in terms of purchasing power. (3) The relationship of depreciation allowances to (a) capital replacements, and (b) capital consumption, represents two independent problems. On the basis of this study, the area of weakness in present depreciation methods lies in the relationship of depreciation to capital consumption. There is no *cause celebre* to be demonstrated by relating depreciation allowances to replacement needs. From this standpoint there is no "inflationary gap."

THE EXTENSION OF THE ACCOUNTING METHODOLOGY BEYOND THE ENTERPRISE

Werner George Frank
University of Illinois, 1958

The objective of this study is to determine whether the characteristics of the accounting methodology are such as to permit it to be applied to units larger than the enterprise. In the light of this objective, the study is basically oriented around the conception of accounting as a technique, rather than around specific uses which may be made of accounting data.

The essential characteristics of the accounting methodology are taken to be the following:

(1) Accounting data originate as a type of description.
(2) This description is in quantitative terms using a monetary measuring unit.
(3) The subject matter of this description are the financial and economic activities of an organized unit together with the means for carrying out these activities and the results of these activities. The characteristic of any unit is its internal homogeneity; as applied to accounting, this homogeneity arises out of the related activities carried out by the unit and the real goods and services and financial claims attributed to the unit.

(4) This description is expressed through a double-entry framework. The significance of the double-entry framework is seen in the means of integration which it provides for relating on the one hand, both economic and financial phenomena, and on the other, both balances of items at any one time and changes in these items over a period of time; i.e., of stocks and flows.

The *a priori* possibility of extending the accounting methodology (in the sense in which it has been described above) beyond the enterprise is suggested by the frequent occurrence in many fields of study of a range of units, each forming a component of a larger unit and consisting itself of a group of smaller units. Such a relationship might be termed the micro-, macro-relationship. The national income-product accounts, the input-output system, the flow-of-funds system, the international balance of payments descriptions, and certain other sector statements were examined in this study as examples of quantitative descriptions in the area of macroeconomics to determine whether such descriptions could be viewed as arising out of the extension of the accounting methodology to this area.

It was concluded that such macro-economic descriptions as the ones examined represent quantitative descriptions of economic and financial phenomena which are measured in monetary terms. Surface differences in presentation of economic activities and stocks and financial activities and claims existed, but were deemed to have arisen out of the special-purpose nature and narrow scope of some of the descriptions rather than fundamental and unreconcilable differences in viewpoint or concept. The accounting units with which these descriptions were concerned met the requirements of an organizational unit in that the activities they carried on and/or the assets and claims attributed to them had special meaning which was given in terms of the organizational units defined. While not all of the individual macro-economic descriptions were specifically cast in a double-entry format, the group of descriptions considered as a whole gave evidence of the interrelatedness and the connections that the double-entry framework basically provides. The existing attempts at integration of these macro-economic descriptions may be viewed as an approach to a more formal accounting structure.

In the broad sense in which the concept of the accounting methodology has been defined and used in this study, it provides a single, unified basis underlying description at both the enterprise level and more aggregate levels. This thesis outlines this framework and shows how it applies to units larger than the enterprise.

PROCEDURES OF CONTROLLING CAPITAL EXPENDITURES, THREE LARGE MANUFACTURING COMPANIES

Erich A. Helfert
Harvard University, 1958

The procedures required to control the outlay of funds for capital equipment additions or replacements must generally cope with the following needs: definition of capital expenditures; timely and reasonably complete discovery and consideration of opportunities for investment; meaningful analysis and screening; budgetary presentation; timely authorization based on competent review; execution within time and dollar limits set; and post-completion followup. The procedures designed for these purposes call for an integrated administrative program, with effective measures at each stage, in order to facilitate meaningful decisionmaking which will reasonably assure maximization of the return on the investment under the circumstance prevailing.

There are, however, wide variations in methodology and approach to capital expenditure control, as well as differences of

opinion. Among other points, so-called "practicality", "short-cuts", or an unwillingness to deal with uncertainty by means of rigorous analysis may result in costly delays, errors, and oversights of profitable avenues for investment. The investigation of the sources of funds for investment and their relative size is an additional problem of great importance, but lies beyond the scope of this study.

Three large manufacturing companies in the metalworking industry known to have developed and instituted control procedures for capital outlays were selected for an intensive comparative study of both the procedures themselves and the results obtained with them. The data were provided through interviews with representatives from all levels of management dealing with capital expenditure appraisal and authorization, through a study of the manuals and policy statements on the subject, as well as through analyses of random samples of actual projects (fifty in each company). Emphasis was placed on studying the administrative processes involved, and the most important question raised was about the relative effectiveness of the systems as bases for decisionmaking.

It was found that the three companies had encountered almost identical administrative and technical problems in the control of capital expenditures. Procedures of similar nature had evolved and differences existed mainly in the degree of development. Significant relationships were found between the extent of refinement to which a company had developed phases of its particular procedure and the quality of capital project administration. This was based on such criteria as timeliness in development and execution of projects, closeness of dollar estimates, quality of the yardsticks used, quality of review (background and experience of the reviewers), and evidence of administrative problems such as communication problems, overt and imagined pressures, and other influences of the human element. Analyses of the sample projects showed consistent tendencies in support of other findings.

Particular conclusions arising from the research can mostly be extended to general application. They include the need for management to 1) realize the importance of capital expenditure control, 2) define criteria of measurement of investment value, 3) supply specialized trained talent able to cope with the economic analysis required, 4) establish approval procedures consistent with the relative importance of projects in order to avoid costly time delays, 5) insist on uniformity of capital project treatment, and 6) integrate all steps of the process, a need stemming from both analytical and administrative problems discovered. The most important conclusion is the endorsement of the need for management at the higher levels to support through attitude and funds the continuing refinement of the procedures, to delegate much of the analysis to trained specialists, and to divest themselves of often meaningless short-cuts.

AN INTEGRATION OF FINANCE AND ACCOUNTING THEORY

Lyle Elmer Jacobsen
University of Illinois, 1958

Contemporary knowledge has become increasingly specialized. As progress is made in areas of theory, it is important that developments be integrated with other specialized areas so that theory may be kept more compatible with reality.

A great amount of progress has been made in the interrelating of accounting and economics. There is also need for relating accounting with the area of finance, which has been developed as a specialized field within the general area of economics comparatively recently. Recognition of the interrelationships among these three fields is especially appropriate in a capitalistic

society. The dual nature of capital implies both a services facet (economics) and a financing or funds facet (finance). This duality may also be described as the asset effect and the equity effect.

Much of present accounting theory is in terms of the services or asset point of view. This results in large part from the integration of the specialized field of cost accounting into general accounting theory.

The central idea of finance may be regarded as the timing of flows of funds. Funds may be either liquid or congealed. Congealed funds are considered to become liquid by recovery through transactions with customers. The complete funds flow cycle consists of acquisition, advance, recovery, and disposition of funds. Financial management is responsible for accomplishing each phase of this cycle. The accountant's task is to report on these phases.

Emphasis upon the cash experience lends support for income determination concepts centered around disposability. From a finance point of view, the distinction between expenses and losses on the basis of contribution to revenue is relatively unimportant since both require recovery. The term, negative elements, may be used to include both; the term, positive elements, is used to describe revenues and gains. Recognition of positive elements of income depends upon the incidents of realization, the recognition of negative elements relies upon the incidents of incurrence.

The theory treatment of the time problem in accounting involves consideration of two possible viewpoints: project emphasis and period emphasis. These two viewpoints are applied in this study to the areas of (1) income determination, (2) maintenance of capital, and (3) internal growth.

It is suggested that the project emphasis is appropriate where termination of the firm is contemplated (ventures). This approach may be valid for internal purposes where speculation about the future is acceptable and where efficiency considerations have a part in control and in allocation of the firm's resources among various projects.

From a finance point of view, it is suggested that the period emphasis is valid for the going concern where no termination is contemplated and where activity does not consist of a series of disjointed ventures or projects, but rather is viewed as definite events during an isolated time period out of an indefinite series of past and future periods. The function of achieving stabilization among periods is the responsibility of financial management. Accounting merely supplies information useful to those charged with the task of stabilization.

A COMPARATIVE STUDY OF THE LEGAL AND ACCOUNTING CONCEPTS OF NET INCOME

Oscar Marvin Kriegman
University of Illinois, 1958

The purpose of this thesis is to examine available material regarding the legal and accounting concepts of net income as found in legal decisions, authoritative accounting pronouncements, and in the opinions expressed by those who have written about law and accounting, in order to determine the following: (1) The similarities and differences that are present in the legal and accounting concepts of net income, (2) the causes of differences and similarities in the net income concept of either of these fields as compared with the other, (3) the extent to which the law has given consideration to the pronouncements of the American Institute of Certified Public Accountants, the publications of the American Accounting Association, and the writings of leading accounting theorists and practitioners, (4) the ways in which the law would benefit and the extent to which the law would be affected adversely

by given sanction to the accounting concept of net income, (5) the ways in which accounting could be made more useful and the degree to which accounting progress would be impeded by incorporating a part or all of the legal concept of net income in its own theoretical and practical framework.

The research indicated that although case-law has often given sanction to generally accepted accounting principles as a standard for the determination of net income in certain areas, these principles have not gained general acceptance by courts of law.

The factors which cause differences and similarities to exist between the legal and accounting concepts of net income are.:

A. *Differences*

1. The law emphasizes adherence to the doctrine of *stare decisis* (the policy of abiding by decided cases) whereas accounting is currently experiencing a period of rapid growth and development, especially in income theory.
2. The law, because of its longer life and greater size, is slower than accounting in reflecting the requirements and needs of the community.
3. The training and working environment of judges and accountants are different.
4. The law does not give fixed meanings to terms as judges want to maintain a degree of flexibility in the rendering of decisions.
5. The objectives, viewpoint, and approach of the law and accounting are different.

B. *Similarities*

1. The law has exerted a profound influence upon the development of certain accounting principles.
2. The judiciary has accepted many accounting concepts and principles in the rendering of decisions.
3. The law and accounting have followed the same line of reasoning in analyzing certain business transactions.

The research indicated also that accounting, as it is practiced today, is not always suitable for determining net income for judicial purposes because many of the accounting principles applied in the determination of net income are not based upon a completely logical and co-ordinated body of accounting thought. However, where accounting principles have a basis in fact and have gained the support of the accounting profession and the business community, the courts are in error and may work injustices by ignoring these principles.

Accounting progress could be greatly impeded if judicial pronouncements were used as a principal basis for the development of the accounting concept of net income because of (a) variations in law from state to state, (b) the fact that the law requires only a "minimum" standard of performance rather than the best, (c) the time lag before accounting questions are adjudicated, (d) differences in legal and accounting objectives, (e) the loose and varied use of accounting terminology in the case-law, and (f) the lack of recognition by the law of the customs of certain industries.

In recent years, many decisions have been rendered in which the courts have shown a keen awareness of the publications of the American Institute of Certified Public Accountants and the American Accounting Association, and the writings of leading accounting theorists and practitioners. Each field does exert important influence upon the other, and if these influences can be kept within reasonable bounds, each will benefit. On the other hand, an extreme emphasis by either field on the conclusions of the other could be detrimental to its progress.

A STUDY OF PLANNING AND CONTROL POLICIES AND PRACTICES EMPLOYED BY SELECTED AMERICAN COMPANIES, WITH SPECIAL EMPHASIS ON BUDGETING

Burnard H. Sord
University of Texas, 1958

This dissertation encompasses a record and analysis of the planning, controlling,

and budgetary policies and practices of 424 American and Canadian business firms. In addition, this study strives to determine the extent of use and application of budgetary practices currently being employed by modern management.

To accomplish the purposes of the study, a list of 820 selected companies was developed. From this list 35 companies were selected for intensive study by direct observation and personal interviews with executives and supervisors. The 35 companies selected are geographically dispersed throughout the United States and Canada, and represent essentially different types of businesses.

Interviews were scheduled at each of the 35 companies with several levels of management. The purpose of this approach was twofold: first, to investigate in depth the planning and control procedures used; and second, to determine the roles of the various levels of management in the planning and controlling processes.

A 4-page mail questionnaire was sent to 780 companies to test the extent to which the reported policies and practices of the 35 companies interviewed prevail; 389 useable replies were received.

The study revealed the following pertinent results relative to planning, controlling, and budgeting:

1. Budgeting is one of the best approaches for obtaining coordination in the utilization of the factors of production—land, labor, and capital—by the individual business enterprise. The study also indicated that the budgeting technique is adaptable to the needs of practically all sizes and types of business. The widespread use of budgeting attests its value as a planning and control technique.

2. Budgeting is more than a mere tool. Budgeting, effectively applied in conformity with the principles and broad patterns of practice revealed by this study, makes possible the maximum delegation of responsibility to successively lower levels of management, and at the same time makes provision for integrated and effective control.

3. The interviews revealed that top management places a real emphasis on active participation in the planning process by all levels of management.

4. The study revealed a distinct pattern of participation in the planning process.

5. Leading companies are utilizing budgeting effectively to motivate individuals to participate willingly and constructively in the management processes.

6. The interviews indicated that before final adoption several levels of management participate in setting standards of performance.

7. The concept of control as it is being followed appears to encompass the following:

a. Recording and reporting actual performance.

b. Comparison of actual performance with planned performance—standards, budgets, plans, and/or objectives.

c. Estimation of future performance

d. Corrective action.

(1) Investigation and analysis.

(2) Corrective action.

(3) Follow-up.

8. The control process involves both ***investigation*** and ***follow-up***, but the two in reality are separated by ***corrective action*** as follows:

a. Investigation and analysis.

b. Corrective action.

c. Follow-up:

(1) To determine adequacy of investigation

(2) To determine effectiveness of the corrective action.

9. A budget program is considered a valuable communications medium. The many conferences, meetings, and contacts involved in developing a formal plan of operations are conducive to a clear understanding of the planned tasks.

10. The budgetary process is extensively used by business firms.

11. The study clearly revealed that the role of lower-level supervisors in the planning and control process is not viewed in the same light by the lower-level supervisors and top management.

ECONOMIC THEORY AND ACCOUNTING PRINCIPLES, A STUDY OF PRINCIPLE-PRACTICE RELATIONSHIPS BETWEEN THE THEORY OF PRODUCTION AND BUSINESS ACCOUNTING

Robert Gene Stevens
University of Illinois, 1958

It was the objective of this study to develop and test the hypothesis that the eco-

nomic theory of production provides a systematic statement of principles through which the accountant may provide data useful for the management of economic resources in a business enterprise. The first part of the study is concerned with the reasonableness of this hypothesis and its implications for accounting. In order to test the hypothesis, the theory of production was analyzed. Next, accounting practices in the areas of planning, control, and income determination and the general ideas of operations research were compared with the theory to determine whether these developments could be deductively derived from the postulates of the theory of production.

The evidence presented in the study revealed that the theory of production is not a body of fundamental principles such as those which might be found in the physical sciences, but the theory is scientific in the sense of the scientific method. At its conceptual base, the theory contains a body of postulates which have proved, if not to be true, at least to be a reasonable approximation of the decision-making processes of the real world. It has been found that many precepts and practices of accounting fit the postulates of this theory. These accounting practices, however, provide only an elementary framework for decision-making. The developments in operations research, on the other hand, prove that the marginal analysis of production theory provides a coherent, consistent, and logical framework for decision-making when it is adjusted for the complications of the real world. Since a conceptual base identical with that of production theory has provided a logical foundation for the practices and techniques of operations research, it is reasonable to conclude that this same conceptual base could also provide a foundation for control accounting and income determination. Consequently, it is possible to develop a principle-practice relationship between production theory and accounting.

At the present stage of development in accounting, a formal principle-practice relationship does not exist between accounting and the theory of production or, presumably, any other theory. The precepts and practices of accounting represent the exercise of good judgment, but these precepts and practices have not been the conclusions of a careful application of the scientific method. The entire process has taken place at the intuitive level. Consequently, all the practices of financial accounting, as one example, do not fit the same body of postulates. There are inconsistencies and conflicts of purpose. So long as judgment in accounting is applied directly to the development of precepts these deficiencies are not likely to be resolved. In both production theory and operations research, judgment is applied at a more fundamental level—the level of postulates. The rest of the structure, then, is deductively derived from this foundation of postulates. Errors can be made in logic, but these are subject to examination because of the nature of the scientific method. Errors in judgment are isolated to one place in the pattern rather than compounded throughout its whole structure. Production theory offers a foundation which could be used to make all the areas of business accounting into a consistent, rational, logical structure. The scientific method offers a means for developing any kind of accounting structure from any generally accepted conceptual framework.

MATCHING REVENUES WITH COSTS: AN ANALYSIS OF ACCOUNTING ADAPTATION TO UNCERTAINTY

Reed K. Storey
University of California, Berkeley, 1958

The most important function of financial accounting is the determination of

periodic income by matching revenues and expenses for accounting periods. Since revenues and expenses are related to cash receipts, disbursements, and other events that occur primarily in the future, income determination is based largely on estimates. Because uncertainty shrouds future events, accountants rely on rules and conventions to make these estimates.

The most important of these conventions concerns the realization of revenue. No revenue is recognized until there has been a sale. The reliance on a transaction involving an outside party diminishes the influence of management on the estimate; the transaction constitutes "objectively verifiable evidence" of the existence and magnitude of the revenue. Inventories are carried at cost in order to match this cost against the revenue derived from their sale.

A valid appraisal of current profit measurement practice depends on a thorough understanding of the basic nature of the process involved. The fundamental relationships are most clearly shown by an income determination model constructed on the assumption of ideal conditions. The place of the realization convention is demonstrated by the removal of the most important of the limiting assumptions—that of the absence of uncertainty. A complete understanding also includes an appreciation of the logical relationship between income determination and valuation of assets that is inherent in the realization convention itself.

Current income determination practice follows the pattern of the ideal model relatively well but is subject to many weaknesses which at least partially result from the realization rule itself: (1) The resulting concept of income is a narrow one with restricted application. (2) The balance sheet is a collection of unexpired costs rather than a true statement of financial condition. (3) The selection of the sale as the critical point is arbitrary, requiring the use of arbitrary procedures to allocate fixed overhead to product, to allocate cost to joint products, and to separate product and period costs in order to match costs with revenues. These decrease both the utility and the objectivity of accounting data.

A change in the realization rule would improve income determination. The earning of revenue is a natural process; it is realization that is now arbitrary. Revenue realization can be made to coincide more with the earning process by valuing inventories at net realizable value (selling price less selling cost) instead of at cost. This type of income determination has several advantages over current practice: (1) The concept of income is more in agreement with theoretical considerations. (2) The estimates are based more on future values and therefore provide more useful information for decision-making and other purposes. (3) Arbitrary cost allocation is minimized. (4) The balance sheet becomes a statement of financial condition. Although this type of income measurement would be of most value to companies with long processing periods and/or fluctuating production (aircraft manufacture and steel are probable examples), it would benefit a company in almost any manufacturing industry.

If the selling prices of the inventories can be adequately predicted, net realizable value can be used for inventories. The selling prices of manufactured goods can be forecast because they are relatively stable. The stability of prices during the inventory turnover period can be tested by statistical methods. The agreement of independent observers regarding the significance of income data will provide objectivity to the results.

This change in the realization convention will increase the utility of accounting because the most probable estimate of

income, given at the earliest possible moment, is more useful than a mere estimate of probable minimum, given later.

PERIODICITY AND THE PROVISION FOR FEDERAL INCOME TAX

Paul Henry Walgenbach
University of Illinois, 1958

Purely deductive approaches to the nature of the corporate Federal income tax provision have led writers and observers of the corporate scene to the various views that the tax is an expense, that it is a loss, or that it is a distribution of profits. Disputes concerning the nature of the tax might be of polemic value only, except for the fact that classifications of the tax by the use of various lines of deductive reasoning have been advanced as rationales for different methods of reporting the tax periodically. At the present time, a considerable division of opinion exists among accounting groups and regulatory bodies about whether the tax provision should be reported on an historical basis or be subjected to allocation techniques.

This study represents an inquiry into the theoretical and practical justification for allocation procedures with respect to the corporate Federal income tax provision. As a part of the theoretical approach, a review was made of the various views concerning the nature of the tax provision which have been presented in the past by the courts, economists, regulatory bodies, professional associations, and in financial and accounting publications. A second section of the writing is devoted to an examination of the divergences which exist between taxable income and business income, and an attempt was made to formulate allocation principles and procedures appropriate in dealing with such variations. These variations include divergences of timing, divergences arising from surplus entries, and divergences due to permanent inclusions and exclusions from either taxable or business income. An appraisal was then made of the limitations and deficiencies of such allocation procedures.

The remainder of the study involves an evaluation of the treatment of the tax provision in financial analysis and financial administration and a discussion of the implications of the tax allocation proposition for these areas. Use of tax data in rate determination and in reorganization proceedings is discussed here in addition to general financial analysis. An attempt was also made to evaluate the effects of allocation procedures upon income determination for a selected group of companies utilizing such procedures over a period of time, in terms of consistency and usefulness of the accounting data presented.

The general conclusions and recommendations derived from the study are as follows:

1) The tax provision is most appropriately regarded as a unique type of cost, whatever frame of reference is utilized.
2) The important features of the tax provision from an accounting standpoint are that it is ordinarily a recurring, periodic type of cost, and that it is the result of periodic transactions.
3) It is incongruous to apply allocation techniques to the transactions on an accrual accounting basis without applying the same techniques to the income tax provision derived from such transactions.
4) In view of the manner in which tax data and earnings figures are generally utilized in various types of financial analysis, it would appear that mere disclosure of unusual tax situations is not adequate to serve the needs of all readers of financial reports, and it is urged that tax allocation techniques compatible with accrual accounting, such as those set forth in this study, be universally applied.
5) It is believed that a combination of tax allocation in the financial statements and a separate reconciliation either between taxable and business income or between the tax provision and the tax liability are necessary in order to serve both the trained

analyst and the lay reader of financial reports.

ACCOUNTING FOR EXECUTIVE STOCK-OPTIONS

Daniel L. Sweeney
University of Michigan, 1958

This study was undertaken in order to determine whether corporate grants of stock-options to executive employees involve significant amounts of corporate entity cost which should be disclosed in published corporate financial statements; and if such cost were found, to devise an accounting concept of the option transaction which will provide satisfactory accounting therefor in the corporate records and statements. The subject is important because of a 1950 change in income tax procedure for stock-options which has made them very desirable to executives, many of whom are realizing after-tax benefit from stock-options which would otherwise be impossible under the present tax-rate structure. Hundreds of major United States corporations have granted executive stock-options since 1950, with only negligible accounting disclosure of related cost appearing in published annual reports to stockholders. This lack of disclosure has resulted in widespread misunderstanding and misinterpretation of the purpose of the option transaction and its impact on the corporation.

In the early chapters material is presented on the nature of the stock option contract and the circumstances in which it is used. The stock-option is compared with other stock-acquisition privileges in order to establish its usefulness to the corporation and the optionee. The number of companies granting stock-options, the number of shares covered by option grants, and the contractual terms of all the plans registered with the Securities and Exchange Commission for shareholder approval from 1940 to 1955 are classified by years and evaluated in terms of both the expressed and the apparent plan objectives. The income tax procedures applicable to both corporation and optionee, and the motives for their adoption, are examined—as are court decisions dealing with tax aspects of optionee income or corporate cost deduction, and other case decisions involving the legal validity of stock-option grants to executives.

Next, the various authoritative accounting concepts of the option transaction advocated during this same period, and the resulting accounting disclosure in published financial statements, are evaluated in relation to the findings of service cost in previous chapters. Both the concepts and the disclosure are demonstrated to be inadequate for proper presentation of the purpose or the results of the transaction from the corporate viewpoint.

The final chapter develops an accounting concept based on a transaction which combines an agreement for executive services with a stock subscription arrangement. The corporate problem is to determine: (1) the total cash value of the executive's services; (2) the portion of the total value to be paid in cash; and (3) from those, the value of services to be invested under the "constructive" stock subscriptions contract. The procedures for accounting and statement disclosure under this concept are developed and integrated with option plan provisions which support the above measure of cost.

General conclusions from the study are that: (1) there is significant corporate cost in the grant of executive stock options, (2) this cost is not being properly reflected in corporate accounts and statements, (3) the absence of disclosure has caused widespread misinterpretation and distortion of the transaction, and (4) the cash-value-of-services concept developed here provides for a conventional accounting pres-

entation which reflects the transaction adequately and realistically.

THE BUDGETARY CONTROL OF FEDERAL EXPENDITURES

Panas Simasathien
University of Illinois, 1958

The rate of spending of the Federal Government of the United States is currently at approximately 70 billion dollars a year. The need for effective control of such a gigantic outlay is evident.

The chief control over Federal expenditures lies in the budget process. Despite several recent improvements, the budgetary control of Federal expenditures is far from effective. There is still room for further improvements.

It is the purpose of this study to examine the control of Federal expenditures as exercised in the various phases of the Federal budget process, and, more important, to point out weak spots in present practice and to examine suggested improvements therefor.

The nature of this study is, in the main, that of library research, including study of recent United States Government documents so that the completed study may reflect the latest legislation, budgetary practice, and possibilities for improvements thereof.

The budgetary control of Federal expenditures concerns three phases of the budget process—the preparation of the budget by the executive and the appropriation process in Congress, the execution of the budget, that is, the actual spending, and the establishment of executive accountability for budget execution.

It is evident in the study that each phase of the Federal budget process has inherent weaknesses. As the Government has grown in complexity and its spending increased many fold, these weaknesses become more pronounced, and the need for improvements more urgent.

In budget preparation, weaknesses are mainly the results of the complexity of the budget document. Improvements in this phase of the budget process can be made by simplifying the budget content so that the time required to prepare and approve the budget can be shortened. The weak spots of the legislative appropriation process lie in the piecemeal consideration of appropriation requests. Each House of Congress should consider appropriation bills in the light of their relation to the total appropriations, revenues, and basic legislation authorizing expenditures. More helps to Congressional Appropriations Committees, staffwise and informationwise, are also needed.

The control of Federal expenditures during the execution of the budget is the area where notable improvements have been made in the past decade. Accrual accounting and cost-based budgeting have been initiated to make expenditure control more effective. Controllability in this phase of the budget process may be increased further if appropriations are made to the executive agencies on the basis of annual accrued expenditures.

The weaknesses in the establishment of executive accountability lie in the anomalous position of the Comptroller General, the lack of adequate consideration and action on his audit reports, and the lack of comprehensive financial reports by the executive to Congress and the public. Thus, it seems desirable that the independence of the Comptroller General be increased by limiting his duties to control functions only—i.e., audits, settlements of accounts, and investigations. His annual report and other audit reports should be constructively critical in regard to financial status and operating results of the executive agencies. They should be con-

sidered by a joint committee of Congress equivalent to the Committee on Public Accounts of the British Parliament so that Congress and the Appropriations Committees can benefit fully from the work and facilities of the General Accounting Office. And, finally, comprehensive external reports should be developed by the executive branch showing the results of the activities of the Government as a whole and of its major component activities, its assets, and liabilities.

THE TEACHERS' CLINIC

GLEN G. YANKEE

EDITOR'S NOTE: This section of THE ACCOUNTING REVIEW is devoted to matters of particular interest to accounting instructors. The contribution of articles bearing on the nature and purpose of various types of accounting education, or dealing with techniques of accounting instruction, is invited. Address all correspondence to Glen G. Yankee, School of Business Administration, Miami University, Oxford, Ohio.

AN ALGEBRAIC MODEL FOR WORKING CAPITAL

ROBERT M. JENNINGS
Duquesne University

The analysis of changes in working capital is often a stumbling block for the accounting student. The balance sheet equation in slightly expanded form can be utilized algebraically to demonstrate all the potential increases or decreases in working capital. The mathematical steps follow:

(1) $A=L+P$ (the balance sheet equation)
(2) Current Assets + Fixed Assets = Current Liabilities + Fixed Liabilities + Owner's Equity (balance sheet equation expanded)
(3) Current Assets − Current Liabilities = Fixed Liabilities + Owner's Equity − Fixed Assets (a grouping of terms)
(4) Working Capital = Fixed Liabilities + Owner's Equity − Fixed Assets (substitution of working capital for its definitional equal)

Equation 4 defines working capital in terms of three general classifications of accounts and actually equates working capital to their algebraic sum. If increases or decreases in working capital are the topic under consideration they can be expressed in terms of net changes in the other accounts either individually or in total. If an increase in working capital is desired it can be secured either individually by a net increase in fixed liabilities, by a net increase in the owner's equity accounts, or by a net decrease in fixed assets; or it can be secured in combination through the simultaneous changes in all three of these types of accounts.

If each of the three right hand items from Equation 4 are examined and the resultant effect on the balance sheet noted, increases in working capital can be traced to an increase in any of the three items. For example, assume an increase in fixed liabilities with the other right hand elements remaining constant—then, working capital must rise. Actual examples in accounting could be the sale of a large bond issue or the securing of a term loan from a bank. Conversely, a decrease in fixed liabilities with the other right hand equation elements remaining constant must decrease working capital, e.g., payment of a bond issue or other long term indebtedness.

An increase in the owner's equity accounts either through additional investment or profit from business operations will increase working capital providing the other right hand members of the equation are held constant. Accounting examples that can be used to clarify this for the student are the sale of stock or the realization of business profits. Conversely, a loss from business operations or a withdrawal of a portion of the owner's equity will reduce working capital if our other right hand items are held constant.

The third component of the right hand side of the equation is fixed assets. Since fixed assets are carried as a subtraction from this side of the equation then changes

in fixed assets will generate an opposite response in working capital. If working capital must be increased through transactions involving the fixed assets only, decreases in the fixed asset accounts are necessary to increase working capital. The obvious way of decreasing fixed assets (hence, increasing working capital) is to sell them, but this is a near-fatal solution to the concern that wishes to remain in business. On the other hand, in the simplified algebraic model the amount of fixed assets is clearly the net book value of these assets. The amount credited to the Accumulated Depreciation account each year reduces this net value and satisfies the condition of reducing fixed assets in the equation. Conversely, decreases in working capital would be accompanied by increases in fixed assets if the other equation components are held constant. The logical increase in fixed assets occurs through their purchase; and if this purchase is not associated with the assumption of fixed liabilities, the sale of stock or the use of current profits, then the fixed asset acquisition has probably been financed by using working capital.

The balance sheets of two successive years and the accompanying profit and loss statement can be simply constructed to show how the factors in the model equation affect working capital.

A Company (newly organized) Balance Sheet December 31, 1957

Fixed assets	$1,000,000	Common stock	$1,000,000
	$1,000,000		$1,000,000

Statement of Income for 1958

Sales (all cash)		$1,000,000
Cost of sales (all cash)	$800,000	
Depreciation expense (10%)	100,000	900,000
Net Profit		$ 100,000

Balance Sheet December 31, 1958

Cash	$ 200,000	Common stock	$1,000,000
Fixed assets	900,000	Retained earnings	100,000
	$1,100,000		$1,100,000

These simple statements reveal that working capital has increased from none at December 31, 1957 to $200,000 at December 31, 1958, and this increase came from the excess of cash revenue over the cash expenses of the business. The recording of depreciation expense has decreased the amount of profit and retained earnings that would have been shown on a cash basis and, in effect, has decreased by $100,000 the increase in owner's equity which could possibly be withdrawn without impairing the legal capital.

A TEST FOR REVERSING ENTRIES

Vernon W. Stone
Maryland State College

It is convenient to classify accounting entries on the basis of five types: (1) journal entry; (2) posting entry; (3) adjusting entry; (4) closing entry; and (5) reversing entry. Perhaps the adjusting and reversing entries present the greatest challenge for the average student.

The rationale of the adjusting entry becomes relatively clear since the student is ordinarily afforded a suitable amount of practice on this type of entry. In time, frequently encountered adjustments, such as those for merchandise inventories, depreciation, and bad debts, are resolved to accounting clerical work. Adjustments predicated upon deferred and accrued items, however, are somewhat more elusive. Inasmuch as the reversing (reversal, or readjusting) entry results from adjustments of deferred and accrued items, it is understandable that many students evidence difficulty in their efforts to reverse or not to reverse adjusting entries. Such a dilemma results partly from inadequate practice. Since entries are reversed as of the first day of the ensuing period, attention to them is anti-climactic as the books are closed as of the end of the current period. More important, though, is the fact that students, by and large, are not introduced to a fundamental, operable principle for determining whether or not a given adjusting entry is to be reversed.

A review of several popular bookkeeping and accounting textbooks has shown that the authors have given most of the reversing-entry space to examples and explanations. Not one of the books reviewed provides a generalized means of determining whether or not an adjusting entry is to be reversed. One author approximates the matter by declaring, in substance, that it is ordinarily advisable to reverse those adjusting entries which result in asset and liability accounts with accrued receivables and payables, as well as with prepaid expenses and unearned incomes. The "ordinarily advisable" phrase would seem to indicate exceptions. What are the exceptions? How are they recognized and negotiated? What is meant by "adjusting entries which result in asset and liability accounts?" Is reference made here to those accounts which are not in the trial balance? Are those accounts without a balance included, whether or not they are in the trial balance? Are the accounts added below the trial balance totals included? Is a reversing entry to be limited to "asset and liability accounts"? Would a capital account ever be reversed? After all, is not the effect of expense and income entries to decrease and increase the capital account?

After experimenting for a number of years with a self-styled test for reversing entries—modifying it as circumstances required—excellent results have been obtained. Thus far, the test has proved infallible!

Stone's Rule: AN ADJUSTING ENTRY RESULTING FROM A DEFERRED OR AN ACCRUED ITEM MUST BE REVERSED IF A REAL ACCOUNT, IN THE PROCESS, IS INCREASED IN ITS USUAL DEBIT OR CREDIT MANNER.

In essence, the rule states, if, in making an adjustment, an asset account is debited, a liability account is credited, or a capital account is credited (drawing account is debited), that adjusting entry must be reversed, or readjusted.

Since only adjustments resulting from deferred and accrued items are reversed, some attention must be given these types

of items. Briefly, we recognize deferred and accrued items in order that the proper expense and income amounts will be reflected in the current period, or the period under consideration. Deferred items result from transactions in which payment has been made, or *the money has passed,* but has not been completely used by the payer. In this instance, either the Company has paid the money, or the money has been paid to the Company. Despite the fact that the money has passed, it is not properly regarded as an expense of the Company, or as income to the Company until the next period, or thereafter. Accrued items result from business situations in which payment has not been made, or *the money has not passed,* as it is not yet due. In this instance, neither has the Company paid the money, nor has the money been paid to the Company. Despite the fact that the money has not passed, it is properly regarded as an expense of the Company, or as income to the Company during the current period, or the period under consideration.

The following chart, entitled "Adjusting Entries Based on Deferred and Accrued Items," permits a concrete application of The Test:

CHART ILLUSTRATING ADJUSTING ENTRIES FOR DEFERRED AND ACCRUED ITEMS

	Example	*Acct. Dr.*	*Type Acct.*	*Acct. Cr.*	*Type Acct.*
A. DEFERRED ITEMS: Payment *has passed* either from the Company or to the Company					
1. Prepaid expense or deferred expense	Insurance premiums paid by the Company, not completely used at end of accounting period				
a. Asset (originally journalized as a debit to an asset account)		Insurance Expense	Expense	Prepaid Insurance	Asset
b. Expense (originally journalized as a debit to expense account)		Prepaid Insurance*	Asset	Insurance Expense	Expense
2. Unearned income or deferred income	Rental fee received by the Company, not completely earned at end of accounting period				
a. Liability (originally journalized as a credit to a liability account)		Unearned Income	Liability	Rent Income	Income
b. Income (originally journalized as a credit to an income account)		Rent Income	Income	Unearned Income*	Liability
B. ACCRUED ITEMS: Payment *has not passed* either from the Company or to the Company					
1. Accrued asset, or accrued income	Interest earned by the Company, not received, not due at end of accounting period	Interest Receivable*	Asset	Interest Income	Income
2. Accrued Liability or accrued expense	Salaries owed by the Company, not paid, not due at end of accounting period	Salary Expense	Expense	Salary Payable*	Liability

* An adjusting entry to be readjusted or reversed.

Following is the analysis and interpretation of the chart, pursuant to an application of The Test:

A-1-a The real account here is PREPAID INSURANCE, an asset account. An asset account is increased by debiting. This asset account is credited. Therefore, this adjustment *is not* to be reversed.

A-1-b The real account here is PREPAID INSURANCE, an asset account. An asset account is increased by debiting. This asset account is debited. Therefore, this adjustment *is* to be reversed.

A-2-a The real account here is UNEARNED INCOME, a liability account. A liability account is increased by crediting. This liability account is debited. Therefore, this adjustment *is not* to be reversed.

A-2-b The real account here is UNEARNED INCOME, a liability account. A liability account is increased by crediting. This liability account is credited. Therefore, this adjustment *is* to be reversed.

B-1 The real account here is INTEREST RECEIVABLE, an asset account. An asset account is increased by debiting. This asset account is debited. Therefore, this adjustment *is* to be reversed.

B-2 The real account here is SALARY PAYABLE, a liability account. A liability account is increased by crediting. This liability account is credited. Therefore, this adjustment *is* to be reversed.

It is hoped that the application of Stone's Rule will aid countless students, instructors, and practitioners in their efforts to bring that sometimes baffling reversing entry into focus. There is some reason to believe that more efficient use will be made of bookkeeping and accounting time. Moreover, the author trusts that The Test will constitute an additional proof of record accuracy.

THE TIMING OF UNAVOIDABLY SPOILED UNITS

G. H. Newlove
The University of Texas

The purpose of this discussion is to explain, illustrate, and compare the mathematical computations and resulting valuations of the three primary methods of accounting for unavoidably spoiled units in process cost industries.

The unofficial solutions to the problems prepared by the American Institute of Certified Public Accountants have recognized three different methods for accounting for unavoidably spoiled production (numbered here for ready identification):

Method No. 1.—Spoiled units are assumed to be taken out of production at the start of operations (P.A.R. Company problem—Process B, November, 1949).

Method No. 2.—Spoiled units are assumed to be discovered by inspection after they are completely processed (P.A.R. Company problem—Dept. 2, November, 1949).

Method No. 3.—Spoilage occurs throughout operations; spoiled units are taken out of production when spoiled and loss on spoilage treated as overhead of the department in which the spoilage occurred (Incredible Gadget Corporation problem, November, 1956).

Under Method No. 1 the spoiled units are weighted by zero and the loss on spoilage is allocated between the units com-

pleted and the units still in process on the basis of the equivalent production (good unit basis). Under Method No. 2 the spoiled units are weighted by unity and the units remaining in process are costed as though there were no spoiled units thereby making the good completed units absorb all the spoilage loss. Under Method No. 3 the spoiled units as to non-burden costs are weighted by the degree of completion when spoiled and the spoiled units as to burden costs are weighted by zero; the non-burden costs on spoiled units are transferred to the burden cost of the department in which the spoilage occurred.

In order to demonstrate the accuracy of the premises of the different accounting methods as to the timing of spoilage, assume the following:

ILLUSTRATIVE CASE

The second department of a factory has the following data pertaining to the labor costs of a single product:

Complete operation requires 10 direct labor hours costing $2 per hour.

No initial in-process inventory.

Final in-process inventory—15 units 40% complete and 10 units 80% complete.

Completed production—70 units (exclusive of spoiled units).

Unavoidably spoiled production—5 units (assume no salvage value).

The labor costs, ignoring the spoiled units, are (under each accounting method) as follows:

Good completed units (70×$20)	**$1,400**
Final inventory—15 units 40% completed (15×.4×$20)	**120**
Final inventory—10 units 80% completed (10×.8×$20)	**160**
Total labor costs ignoring spoiled units	**$1,680**

The labor outlays on the spoiled units are assumed to be zero under Spoilage Method No. 1 as the spoilage is assumed to occur at the start of the operations, and are $100 (i.e., 5×$20) under Spoilage Method No. 2 as the spoilage is assumed to occur at the end of the operations. Assuming that the spoiled units average having gone 60% through the operations when spoiled, the labor outlays on the spoiled units under Spoilage Method No. 3 are $60 (i.e., 5×.6×$20).

The total labor outlays, therefore, are:

SCHEDULE No. 1

	Direct Labor Cost of			
	Units Completed	*Final Inventory*	*Spoiled Units*	*Total*
Under Method No. 1	$1,400	$280	-0-	$1,680
Under Method No. 2	1,400	280	$100	1,780
Under Method No. 3	1,400	280	60	1,740

The equivalent production schedules are:

SCHEDULE No. 2

	Spoilage Method		
	No. 1	*No. 2*	*No. 3*
Transferred out:			
Good	70	70	70
Spoiled (5 units):			
Method No. 1 (5×0)	-0-	—	—
Method No. 2 (5×1.0)	—	5	—
Method No. 3 (5×.6)	—	—	3
Final inventory:			
40% complete (15×.4)	6	6	6
80% complete (10×.8)	8	8	8
E. P. Units (good)	84	—	—
E. P. Units (good and spoiled)	—	89	87

The cost schedules under the different spoilage methods are:

	Method No. 1			*Method No. 2*			*Method No. 3*		
	Units	*Rate*	*Cost*	*Units*	*Rate*	*Cost*	*Units*	*Rate*	*Cost*
New Units:									
Good	84	$20	$1,680						
Good and spoiled				89	$20	$1,780	87	$20	$1,740
Final inventory	14	20	280	14	20	280	14	20	280
Net							73	20	$1,460
Spoiled units to Burden in Process							3	20	60
Transferred out:									
Gross				75	20	$1,500			
Spoiled				5		-0-			
Good	70	20	$1,400	70	21	$1,500	70	20	$1,400

A comparison of the labor outlays (schedule #1) and the cost schedule (schedule #2) demonstrates that Spoilage Method No. 1 satisfactorily matches costs and revenues. Spoilage Method No. 2 is also satisfactory since the unknown spoilage losses that have or will occur in connection with the final inventory will be charged to the goods in process when the amount is known. There is a mathematical fallacy in Spoilage Method No. 3 in that the spoilage losses are computed on the assumption that they occurred during operations; these losses are then allocated between the inventoried and the transferred units on the assumption that the units are spoiled at the start of operations—an apparent inconsistency.

The accuracy of a final in-process inventory labor cost of $280 under each of the three methods of accounting for spoilage can be demonstrated as follows:

a. Under Method No. 1 there is no spoiled labor as the units are spoiled at the *start of* of the labor operations.

b. Under Method No. 2 the labor costs on spoiled units are charged to the transferred production and not to the inventoried production.

c. Under Method No. 3 the labor costs on spoiled units are charged to the Burden in Process account and not to the labor costs of either the transferred or inventoried production.

The King Process Company problem (No. 5 in Part II, Accounting Practice examination, November, 1958) involved a point new to C.P.A. examinations although not new in cost accounting literature. The problem stated that "spoilage generally occurs in Process No. 2 when the processing is approximately 50% complete." The unofficial solution (107 *Journal of Accountancy*, 67–68; 34 Accounting Review, 314) treated this problem as though it involved Spoilage Method No. 1. Technically the solution is incorrect as the costs for the first half of the process (including the inspection costs) should have been allocated under Method No. 2 and the costs for the second half of the process should have been allocated under Method No. 1 (suitable for cases with no spoilage). Since the King Process Company problem gave no basis for splitting the conversion costs between the two halves of the process, it must be assumed that a Method No. 1 solution was expected; further the unit costs came out in round figures if Method No. 1 was used.

If all the spoilage in the illustrative case above had occurred when the product was 50% complete (as in the King Process Company problem), the total labor costs would be $1,730 (i.e., $1,680+(5×.5×$20)).

Designating the first half of the operations as Process A and the second half as Process B, the total labor costs would be allocated as follows:

Process A		
Good units sent to Process B (80×5×$2)	$800	
Units spoiled at end of Process A (5×5×$2)	50	
Final inventory (15 units 40% done as to entire operations or 80% done as to Process A operations) (15×4×$2)	120	$ 970
Process B		
Good units sent to stockroom (70×5×$2)	$700	
Final inventory (10 units 90% done as to entire operations so each unit had 5 hours in Process A and 3 hours in Process B, i.e., each unit is chargeable for all of Process A's unit cost and 60% of Process B's unit cost (10×3×$2)	60	760
Total labor outlays		$1,730

The equivalent production schedules for Process A under Spoilage Method No. 2 and for Process B under Spoilage Method No. 1 would be:

	Units		
		Process B	
	Process A Labor	*Prior Dept. Costs*	*Labor*
Transferred out:			
Good	80	70	70
Spoiled	5	—	—
Final Inventory:			
In Process A (15×.8)	12	—	—
In Process B:			
Process A cost (10×1.0)	—	10	—
Process B cost (10×.6)	—	—	6
E. P. units:			
Good unit basis	—	80	76
Good and spoiled unit basis	97	—	—

The cost schedules would be:

	Process A—Labor in Process			*Process B*					
				Prior Dept. Costs in Process			*Labor in Process*		
	Units	*Rate*	*Costs*	*Units*	*Rate*	*Cost*	*Units*	*Rate*	*Cost*
New units:									
Good and spoiled	97	$10	$970	—	—	—	—	—	—
Good	—	—	—	80	$10.625	$850	76	$10	$760
Final inventory	12	10	120	10	10.625	106	6	10	60
Transferred out:									
Good and spoiled	85		$850	—	—	—	—	—	—
Spoiled	5		-0-	—	—	—	—	—	—
Good	80		$850	70		$744	70		$700

Spoilage Method No. 1 is discussed in most cost accounting textbooks although the authors usually do not mention the timing of the spoilage. Spoilage Method

No. 2 is frequently discussed usually in connection with problems involving brick kilns. Spoilage Method No. 3 is seldom presented although it is treated in Devine (pp. 72–73), Lawrence and Ruswinckel (p. 256), Neuner (second edition, pp. 334–335), Newlove and Garner (second edition, pp. 357–358), Vance (first edition, pp. 349–350), and Kane, 103 *Journal of Accountancy* 72.

AN EVALUATION OF A SLIDE-LECTURE METHOD FOR TEACHING A LARGE SECTION OF COLLEGE AUDITING

ANTHONY J. MASTRO AND FRANK R. HARTMAN*
The Pennsylvania State University

Recent years have evidenced a steadily increasing interest in the development of new methods and techniques of college teaching on the part of most institutions of higher learning. Colleges of business administration have been no exception to this trend. The stimulants to the inquiry into teaching methodology have been numerous, but among the most important has been a simple dissatisfaction with the established pedagogy.

In part, this dissatisfaction may be a result of the human conviction that a better way can always be found. However, more immediate in the thoughts of most educators is the inadequacy of the older teaching techniques for meeting the continually increasing pressure of student enrollments. This pressure has slowly raised the size of the class which a college professor is expected to teach to a figure which some people fear has already adversely affected the quality of instruction. If the current estimations of the population increase are correct, the prognosis is for a worsening, not a betterment of the enrollment situation.

The subject of this paper is the use of a technique, in the teaching of auditing, which is not particularly sensitive to increases in class size and which it is hoped will eventually prove to be superior to conventional teaching methods. This technique involves the use of a complete series of especially prepared slides.

THE SLIDE-LECTURE METHOD

Over four hundred slides were prepared covering every phase of the course in auditing from the reproduction of ledgers and balance sheets to photographs of the physical layouts of typical commercial concerns which an auditor might expect to encounter.

Preparation of the Slides

The majority of the slides prepared were reproductions of methods of analyzing the various balance sheet and operating accounts and other illustrations not usually found in text books such as acceptable and unacceptable endorsements, federal income tax spread sheets, adjusting journal entries-net effect schedule, etc. The materials used for the preparation of the slides were quite simple—a flo-tip pen (drafting type), india ink, accounting ledger paper, rulers, scissors, and masking paper and tape. The accounting ledger paper used was a ten columnar post binder type with

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* Mr. Mastro is an Assistant Professor of Accounting in the College of Business Administration and is responsible for the development of the slide-lecture method for the teaching of auditing. Mr. Hartman is a Research Associate with the Division of Academic Research and Services and had the responsibility for the evaluation of the method.

no description space. Since the original dimensions of the paper were not amenable to the demands of the slide format, the sheets were trimmed to the required 9-$\frac{1}{4}$" on the vertical axis and 10" on the horizontal. The numbers on both sides of the paper and all the lines were retained for reference. When the preparation of a series of original materials was complete, it was submitted to a laboratory for photographic copying. The end product was a set of "super" slides with external dimensions of 2"×2", and a square slide opening of 1-$\frac{1}{2}$"×1-$\frac{1}{2}$". For purposes of illustration, the following is a typical sequence of slides.

The Slide Sequence for the Audit of Cash

Slide 1. General ledger accounts: Cash in bank, upper half; Petty cash, lower half.

Slide 2. Lead cash schedule with columnar headings: per workpapers prior year end, per books current year ending, adjustments columns (Debit and Credit) and final current year ending. Also included was a list of related accounts to be examined concurrently.

Slide 3. Examination of cancelled checks: Face of cancelled check with bank perforation, upper half; back of cancelled check with endorsement, vertical center of lower half.

Slide 4. Outstanding checks: Check register, current month, with columnar headings of net, number, date, payee, left half; clients bank reconciliation, prior month, upper right half; checks cancelled section of bank statement, current month, with dates, lower right half.

Slide 5. Deposits: Cash receipts, current month, with columnar headings of net, date, payor, left half; deposits section of bank statement, current month, with dates and balances, right half.

Slide 6. Proof of cash, vertical method: Bank statement totals, current month, upper third; receipts per books, proof, current month, middle third; disbursements per books, proof, current month, lower third.

Slide 7. Standard bank confirmation form: Completely filled in.

Slide 8. Outstanding check listing and adjusting journal entries resulting from proof of cash.

Slide 9. Bank charge slip, check book printing, upper half; bank credit slip, note collection, lower half.

Slide 10. Bank charge slip, insufficient funds, upper half; certified check, lower half.

Slide 11. Outstanding checks, same as Slide 4, except for cut-off period instead of current month.

Slide 12. Deposits, same as Slide 5, except for cut-off period instead of current month.

Slide 13. Proof of cash, four-column bank reconciliation, for cut-off period: From bank statement totals to book totals, upper half; a continuation to book adjusted totals, lower half.

Slide 14. Same as Slide 8, for cut-off period.

Slide 15. Bank transfers, year end and cut-off with columnar headings, book and bank dates, number, bank disbursed, amount bank received, book and bank dates, upper third; to detect the existence of kiting, middle third; types of bank transfers, lower third.

Slide 16. Outstanding checks and deposits, combining approach of Slides 4 and 5 to payroll account.

Slide 17. Payroll account reconciliation, zero basis with adjusting journal entries.

Slide 18. Outstanding checks and deposits, same as Slide 16, except for cut-off period.

Slide 19. Multiple and/or irregular endorsements with columnar headings, date, number, amount, payee, endorsement(s), examined, upper third; examples of acceptable and unacceptable endorsements, middle and lower thirds.

Slide 20. Lapping, a four day year end period with columnar headings, date, accounts receivable, amount collected, entry cash receipts book, amount on deposit ticket.

The slides on cash continue with duplicate deposit slips, petty cash count, petty cash adjusting journal entries, examples of petty cash vouchers, petty cash reimbursement voucher, internal control comments and charts, audit memo, and, finally, the completed lead schedule.

It has been previously mentioned that some of the slides were black and white photographs of the physical facilities of

FIG. 1. CONTENT OF A SLIDE TYPICAL OF THE CASH SERIES

Example of Lapping

Date	*Accounts Receivable*		*Amount Collected*		*Entry-Cash Receipts Book*		*Amount on Deposit Ticket*
12-28-58	Brown	(A)	200.00	(1)		(A)	
	Smith		149.50		149.50		149.50
	Canne		183.10		183.10		183.10
	Totals		532.60		332.60		332.60
Defalcation						(A)	200.00
12-29-58	Daro	(B)	100.00	(2)		(B)	
	Lane		217.40		217.40		217.40
	Pond		720.30		720.30		720.30
	Hale		198.18		198.18		198.18
	Totals		1,235.88		1,135.88		1,135.88
Defalcation						(B)	100.00
12-30-58	Mill (currency)	(C)	220.00	(3)		(C)	90.10
	Burns		209.90	(4)			209.90
	Aron		102.00		102.00		102.00
	NONE		NONE	(1)	200.00		NONE
	NONE		NONE	(2)	100.00		NONE
	Totals		531.90		402.00		402.00
Defalcation						(C)	129.90
12-31-58	King (currency)	(D)	191.00	(5)		(D)	28.90
	Marn		301.00	(6)			301.00
	Whita		126.00		126.00		126.00
	Dean		100.00	(7)			100.00
	NONE		NONE	(3)	220.00		NONE
	NONE		NONE	(4)	209.90		NONE
	Totals		718.00		555.90		555.90
Defalcation						(D)	162.10
			3,018.38		2,426.38		
TOTAL DEFALCATION							592.00

The above example of lapping is contained on Slide 20 in the cash series. And it is indicative of the quantity of data that appears on the "super" slides throughout the slide presentation.

typical business concerns which an auditor is likely to encounter. Approximately one hundred of these photographs were taken by the instructor using minimum equipment which consisted of a 35 mm. camera with flash attachment, a tripod and a light meter. The photographic laboratory developed the film and produced the slides directly from the negatives. Business concerns given photographic representation included: a jeweler, a department store, an automobile dealer, a super market, a five and ten cent store, a retail men's clothing store, and a bank. The sequence on the bank is described below as typical of the approach taken in depicting a business concern.

Photographic Presentation of a Bank Layout

Slide 1. The Bank Building Entrance and Exterior.
Slide 2. The Entire Banking Floor.
Slide 3. The right side of the banking floor; inside area of checking and savings account tellers.

Slide 4. The left side of the banking floor; inside area of special account tellers (mortgages, loans, bank statements, etc.).
Slide 5. A close-up of the active, inactive, and signature savings account cards in open cabinet safe.
Slide 6. The bookkeeping area.
Slide 7. The main vault; entrance and long view of interior.
Slide 8. The main vault; close-up of safe deposit boxes.
Slide 9. The subsidiary vault; reserve cash, mortgage documents, etc., housed therein.
Slide 10. The Board of Directors meeting room.

Some additional slides showed variations in the above scenes.

Presentation of the Slides

The sequences of slides were assembled in special slide trays or magazines. They were projected by a remote-controlled 500 watt slide projector. Auxiliary equipment necessary consisted of a forty-foot remote-control cord and a ten by ten foot wall screen in each classroom. The projected image was approximately the size of the screen. The projected material was clearly legible to a distance from the screen of at least 40 ft. (the maximum viewing distance in the experiment) for persons of near normal eyesight. With proper illumination the viewing distance could possibly be increased to 60 feet since the slides were designed to be legible to a viewing distance of six times the width of the projected image.

Since all the illustrative materials for the course were contained in the slide sequences, the lecture consisted of alternating the formal lecture method with a Socratic approach in which the questions and responses were built around the projected material. However, an entirely formal lecture method could have been adopted just as easily. The material discussed was immediately accessible, both to the student and the instructor, and additional time for presentation was available to the instructor through the elimination of the necessity for blackboard preparation.

EVALUATION OF THE SLIDE-LECTURE METHOD

The authors were faced with the dilemma of wishing answers to two questions concerning the effectiveness of the slide lecture method, but having only enough time available to deal with a single question. On one hand the slide-lecture method could be compared with the standard teaching techniques; on the other, the method's ability to deal with larger than normal groups could be tested. In terms of the applicability to the situation at The Pennsylvania State University the latter question was deemed the more pressing. It is, therefore, the question of the effectiveness and feasibility of the method with large numbers of students that this evaluation is concerned. The procedure and results of this investigation will now be outlined.

Experimental Procedure

Thirty-seven students, whose schedules permitted assignment to either the eleven or twelve o'clock hour, were randomly divided between these two class times. The class meeting at the eleven o'clock hour received the slide-lecture presentation in a large auditorium of 126 seats. There were 65 students in this class, (including the 19 randomly assigned students who were scattered through the room). The twelve o'clock class consisted of 28 students, (including 18 randomly assigned to this group) and met in a small (42 seat) classroom. Both classes received the identical slide-lecture presentations, and the experimental comparisons were made only between the students who had been randomly assigned to the two groups. This procedure was necessary to meet the basic

TABLE I

COMPARISON ON COURSE EXAMINATIONS OF STUDENTS TAUGHT BY THE SLIDE-LECTURE METHOD IN A LARGE CLASS WITH THOSE TAUGHT BY THE IDENTICAL METHOD IN A SMALL CLASS

Exam	*Reliability (Kuder-Richardson)*	*Mean Large Class*	*N*	*Mean Small Class*	*F*	*N*	*Significance*
1	.78	77.95	19	72.61	1.39	18	>.05
2	.63	58.16	19	49.44	6.15	18	<.05
3	.91	64.24	17	73.25	4.05	16	>.05
4	.91	67.74	19	64.72	.35	18	>.05
All (4) Exams		267.11	19	261.00	.27	18	>.05

requirements for the application of a statistical test of significance.

The experimental students in the two classes were compared upon four examinations during the course of the semester. These examinations contained a large number of sub-units weighted by the instructor to achieve a maximum total score of approximately 100 points. These weighted scores were used as the criterion of learning for the experiment. However, the test scores in their weighted form were not easily amenable to reliability assessment. For this latter purpose the examinations were rescored on a simple right-wrong basis and Kuder-Richardson coefficients of test reliability computed; these are given in Table I.

A questionnaire was administered to both classes, experimental and non-experimental students alike, at the end of the semester.

Results on Achievement

The comparison on the course examination of the experimental students subjected to large and small class situations is given in Table I.

As can be seen in Table I, the students situated in the large class obtained higher mean scores in three of the four examinations. In only one of these instances, however, was the obtained difference above the five per cent level of significance as evaluated by analysis of variance.

Since the findings on the four examinations were not entirely consistent, an analysis of the totals of the four missing scores (resulting from absences) on the third examination were estimated by obtaining these subjects' Z-scores for the totals of the other three examinations and converting the obtained Z-scores to third examination raw scores. The results of this analysis of variance of the totals over the four examinations indicate no statistically demonstrable differences between the students from the two classes, although there is a slight advantage in mean score for the large class group.

It is concluded that there are no real differences in achievement as measured by our examinations between students taught in the large and small groups by the slide-lecture method. This conclusion must be qualified by the results of the questionnaire administered to the two classes at the end of the semester which are reported in Table II.

Results of Questionnaire

Table II contains the results on three of the most pertinent of the questions contained in a questionnaire administered at the end of the course. The obtained percentages are arranged to facilitate a comparison between the large and small classes and among the rear and front halves of these classes. This latter comparison was included because it was thought that distance from the viewing screen might be a crucial determinant of attitude.

TABLE II

COMPARISON OF RESULTS ON THREE ITEMS FROM QUESTIONNAIRE ADMINISTERED AT THE END OF THE SEMESTER

	Front of Large Class	*Front of Small Class*	*Rear of Large Class*	*Rear of Small Class*	*Large Class*	*Small Class*	*Total*
I am able to read the material on the slides:							
a. Very easily	30%	71%	13%	67%	24%	70%	36%
b. Rather easily	62%	29%	43%	33%	56%	30%	49%
c. Some difficulty	8%	0%	35%	0%	17%	0%	13%
d. Great deal of difficulty	0%	0%	9%	0%	3%	0%	2%
	100%	100%	100%	100%	100%	100%	100%
In general I have found note taking from the slides to be:							
a. Extremely easy	2%	0%	5%	11%	3%	4%	3%
b. Fairly easy	28%	50%	13%	22%	22%	39%	27%
c. Rather difficult	50%	43%	65%	67%	56%	53%	55%
d. Very difficult	15%	7%	17%	0%	16%	4%	13%
e. No answer	5%				3%		2%
	100%	100%	100%	100%	100%	100%	100%
Regarding the use of slides in Accounting 6 in the future I should recommend their continuation:							
a. Unhesitatingly	5%	14%	9%	22%	6%	17%	9%
b. In general	25%	65%	30%	45%	27%	57%	35%
c. With some reason reservation	60%	21%	30%	11%	49%	17%	41%
d. Only if greatly improved	0%	0%	14%	0%	5%	0%	3%
e. Not at all	10%	0%	17%	22%	13%	9%	12%
	100%	100%	100%	100%	100%	100%	100%

Examination of the comparison of the questionnaire responses of the large with the small class indicates a consistantly more favorable reaction on the part of the small class. However, although the answers of students at the front of the large class are, in general, more favorable than those in the rear, they are much less favorable than those in the small class in spite of the fact that the viewing conditions for the students in the front section of the large class were comparable to the small class viewing conditions.

Discussion and Conclusions

The efficiency of the slide-lecture system in teaching auditing to large classes seems to have been reasonably well demonstrated. The remaining question of increased effectiveness over the traditional method will be tested in the near future. The College of Business Administration at The Pennsylvania State University is sufficiently confident of the answer to this second question that the slide-lecture method has been adopted for the coming academic year. Two additional innovations will be introduced. First a set of lecture notes, which was available only for the closing weeks of the semester in which the experiment was carried out, will be made available from the start. These notes were enthusiastically received by the students and greatly reduce the tedium of note taking. Second, more extensive laboratory periods will be provided throughout the course rather than in the closing weeks only. This second provision is possible because of the saving of teacher time resulting from the use of the slide-lecture system with a large group of students.

PROFESSIONAL EXAMINATIONS

ACCOUNTING PRACTICE

Henry T. Chamberlain and John H. Chamberlain

The following problems were prepared by the Board of Examiners of the American Institute of Certified Public Accountants and were presented as the second half of the C.P.A. examination in accounting practice on November 5, 1959. The candidates were required to solve problems 1 and 2 and any two of the remaining three problems. The suggested time allowances are as follows:

Problem 1	40 to 60 minutes
Problem 2	60 to 90 minutes
Any two of Problems 3, 4 and 5	80 to 120 minutes

Number 1

Ace Publishing Company is in the business of publishing and printing guide books and directories. The Board of Directors has engaged you to make a cost study to determine whether the company is economically justified in continuing to print, as well as publish, its books and directories. You obtain the following information from the company's cost accounting records for the preceding fiscal year:

	Departments			
	Publishing	*Printing*	*Shipping*	*Total*
Salaries & wages	$275,000	$150,000	$25,000	$ 450,000
Telephone & telegraph	12,000	3,700	300	16,000
Materials & supplies	50,000	250,000	10,000	310,000
Occupancy costs	75,000	80,000	10,000	165,000
General & administrative	40,000	30,000	4,000	74,000
Depreciation	5,000	40,000	5,000	50,000
	$457,000	$553,700	$54,300	$1,065,000

Additional data:

1. A review of personnel requirements indicates that, if printing is discontinued, the publishing department will need one additional clerk at $4,000 per year to handle correspondence with the printer. Two layout men and a proofreader will be required at an aggregate annual cost of $17,000; other personnel in the printing department can be released. One mailing clerk, at $3,000, will be retained; others in the shipping department can be released. Employees whose employment was being terminated would immediately receive, on the average, three months' termination pay. The termination pay would be amortized over a five year period.

2. Long distance telephone and telegraph charges are identified and distributed to the responsible department. The remainder of the telephone bill, representing basic service at a cost of $4,000, was allocated in the ratio of 10 to publishing, 5 to printing and 1 to shipping. The discontinuance of printing is not expected to have a material effect on the basic service cost.

3. Shipping supplies consist of cartons, envelopes and stamps. It is estimated that the cost of envelopes and stamps for mailing material to an outside printer would be $5,000 per year.

4. If printing is discontinued, the company would retain its present building, but would sublet a portion of the space at an annual rental of $50,000. Taxes, insurance, heat, light and other occupancy costs would not be significantly affected.

5. One cost clerk would not be required ($5,000 per year) if printing is discontinued. Other general and administrative personnel would be retained.

6. Included in administrative expenses is interest expense on a 5% mortgage loan of $500,000.

7. Printing and shipping room machinery and equipment having a net book value of $300,000 can be sold without gain or loss. These funds in excess of termination pay would be invested in marketable securities earning 5%.

8. The company has received a proposal for a five-year contract from an outside printer, under which the volume of work done last year would be printed at a cost of $550,000 per year.

9. Assume continued volume and prices at last year's level.

Required:

Prepare a statement setting forth in comparative form the costs of operation of the printing and shipping departments under the present arrangement and under an arrangement in which inside printing is discontinued. Summarize the net saving or extra cost in case printing is discontinued.

Number 2

The manager of The Thomas Manufacturing Company has reviewed the annual financial statements for the year 1958 and is unable to determine from a reading of the balance sheet the reasons for the changes in working capital during the year. He asks you for assistance and presents the following balance sheets of The Thomas Manufacturing Company.

	December 31, 1958	*December 31, 1957*	*Increase (Decrease)*
Goodwill	-0-	$ 200,000	$(200,000)
Buildings	$ 810,000	560,000	250,000
Land	140,000	150,000	(10,000)
Machinery	330,000	200,000	130,000
Tools	40,000	70,000	(30,000)
Bond investment	18,000	15,000	3,000
Inventories	210,000	218,000	(8,000)
Accounts receivable	180,000	92,000	88,000
Notes receivable—trade	21,000	27,000	(6,000)
Cash in bank	-0-	8,000	(8,000)
Cash on hand	2,000	1,000	1,000
Unexpired insurance—machinery	1,200	1,400	(200)
Deferred bond discount	2,100	2,500	(400)
	$1,754,300	$1,544,900	$ 209,400
Capital stock	$ 700,000	$ 400,000	$ 300,000
Bonds payable	150,000	100,000	50,000
Accounts payable	58,000	52,000	6,000
Bank overdraft	4,000	-0-	4,000
Notes payable—trade	9,000	10,000	(1,000)
Bank loans—short term	5,500	6,800	(1,300)
Accrued interest	10,000	6,000	4,000
Accrued taxes	5,000	3,000	2,000
Allowance for bad debts	4,500	2,300	2,200
Allowance for depreciation	271,200	181,000	90,200
Retained earnings	537,100	783,800	(246,700)
	$1,754,300	$1,544,900	$ 209,400

You are advised that the following transactions took place during the year:

1. A two per cent dividend was declared and paid, on the outstanding capital stock at the first of the year.
2. There were no purchases or sales of tools.
3. Stock was sold during the year at 90; the discount was charged to the Goodwill account.
4. Old machinery which cost $4,500 was scrapped and written off the books. Accrued depreciation on such equipment was $3,300.
5. The Income Statement for the year, 1958, was:

Sales (net)		$1,250,000
Operating charges:		
Material and supplies	$250,000	
Direct labor	210,000	
Manufacturing overhead	181,500	
Depreciation	123,500	
Selling expenses	245,000	
General expenses	230,000	
Interest expense (net)	7,500	
Total		1,247,500
Net profit to retained earnings		$ 2,500

(There were no unusual items in any of the above listed income and expense accounts.)

Required:

a. An application of funds statement, supported by a schedule of working capital changes.

b. A cash flow statement, supported by a schedule detailing the cash provided or applied by profits or losses from operation.

Number 3

The Walsch Company manufactures a single product, a mechanical device known as "Klebo." The company maintains a process cost type of accounting system.

The manufacturing operation is as follows:

Material K, a metal, is stamped to form a part which is assembled with one of the purchased parts "X." The unit is then machined and cleaned, after which it is assembled with two units of part "Y" to form the finished device known as a "Klebo." Spray priming and enameling is the final operation.

Time and motion studies indicate that of the total time required for the manufacture of a unit the first operation required 25% of the labor cost, the first assembly an additional 25%, machining and cleaning 12.5%, the second assembly 25%, and painting 12.5%. Manufacturing expense is considered to follow the same pattern by operations as does labor.

The following data are presented to you as of October 31, 1959, the end of the first month of operation:

Material K purchased—100,000 lbs.	$25,000
Part X purchased—80,000 units	16,000
Part Y purchased—150,000 units	15,000
Primer and enamel used	1,072
Direct labor—cost	45,415
Manufacturing expenses	24,905

	Unit Quantity
Units finished and sent to finished goods warehouse	67,000
Units assembled but not painted	5,000
Units ready for the second assembly	3,000
Inventories at the end of the month:	
Finished units	7,500
Material K (lbs.)	5,800
Part X (units of part X)	5,000
Part Y (units of part Y)	6,000
Klebos in process (units)	8,000

Required:

a. A schedule of equivalent labor production.

b. A schedule of total and unit costs incurred in production for:

(1) Each kind of material
(2) Labor cost
(3) Manufacturing expense
(4) Total cost of production

c. A schedule of detailed material, labor and manufacturing costs assigned to the units left in process.

Number 4

Omega Brothers Company operates a department store with some departments leased to outsiders. The operation of leased departments is fully integrated with the operation of owned departments. However, the buying is done by outside owners of the departments, and the inventory is the property of the lessees. The rental for space occupied is a percentage of sales.

Inventories of certain owned departments—restaurant, work rooms, etc., named "cost departments,"—are valued on the basis of cost, and have been reduced to the lower of cost or market. The inventories of the remaining owned departments are computed on the retail-inventory method. The inventories of the "retail departments" have been taken on the basis of selling prices appearing on the merchandise at the close of business at January 31, 1959; all of the required mark downs were made prior to taking the inventory and the inventory was priced accordingly.

The profit and loss trial balance for the year ended January 31, 1959, is as follows:

	Debit	*Credit*
Sales		$3,185,400
Returned sales	$ 250,000	
Inventory, February 1, 1958	354,000	
Purchases (net)	1,930,000	
Provision for inventory shrinkage	24,000	
Loading account—7%		124,181
Administrative expenses	198,000	
Occupancy expenses	260,000	
Publicity expenses	136,000	
Buying expenses	96,000	
Selling expenses	420,000	
Leased department income		35,000
Net loss		323,419
Total	$3,668,000	$3,668,000

Omega Brothers Company has consistently followed a policy, to which your firm agrees, of adding 7% to purchases for retail departments. The offsetting credit is recorded in the account "Loading account—7%." A Reserve for Loading account is

adjusted at the end of the year to remove unrealized profit from inventory. The 7% loading is to be used in computing the cost-retail per cent.

Your investigation reveals that:

(1) Sales and returned sales accounts are composed as follows:

	Sales	Returned Sales
Sales price:		
Retail departments	$3,055,400	$244,400
Cost departments	61,000	1,600
Additional charges—Consumers' taxes:		
Retail departments	65,000	3,700
Cost departments	4,000	300
Total	$3,185,400	$250,000

(2) Sales of leased departments of $310,000 and returns of leased departments of $29,000 are excluded from sales and returned sales accounts.

(3) Inventory at February 1, 1958 is composed as follows:

Cost departments	$ 3,400
Retail departments (including loading of 7% on net cost)	350,600

(4) Aggregate selling prices of February 1, 1958 inventory amount to $590,000.

(5) Purchases consisted of the following:

Purchases, cost departments (net)	$ 31,800
Purchases, retail departments (net)	1,774,019
7% loading on net cost of purchases, retail	124,181

(6) Aggregate selling prices of net purchases for retail departments amount to $3,280,000.

(7) Inventories at January 31, 1959 were:

Cost departments, at lower of cost or market	$ 4,200
Retail departments, at selling prices	952,000

(8) Additional mark up on purchases of $40,000 was taken during the year.

(9) Mark downs amounted to $116,000 and mark down cancellations to $5,000 during the year.

(10) The Reserve for Loading account showed a balance of $22,936 at February 1, 1958, to reduce inventory to cost.

(11) The Reserve for Inventory Shrinkage account at January 31, 1959, shows a balance of $24,000 accumulated by monthly provisions based on percentage of sales.

Required:

a. Prepare the necessary adjusting journal entries to record the closing inventory and adjust the reserve accounts on January 31, 1959. Support each entry with clearly detailed computations.

b. Prepare a profit and loss statement worksheet which will reflect any necessary changes from book balances to adjusted balances.

Number 5

The City of Linde, organized on January 1, 1944, has never kept accounts on a double entry system. During 1958 the city council employed you to install a system of accounts. You made a study and determined the values of assets and liabilities in order to inaugurate the proper system as of January 1, 1959, the beginning of the city's fiscal year, as follows:

1. City Taxes Receivable—1958 and prior years (including 10% considered uncollectible)	$ 21,900
2. Investment in Securities	
(a) Earmarked to Bond Retirement	136,680
(b) Donated by J. Stark on July 1, 1958, the net income from which to supplement Library operations. The cost of all the stock to Stark was $50,000. Appraised value on July 1	65,400
3. Cash	
(a) For general operations, including $3,000 in petty cash	18,000
(b) Earmarked to investments for bond retirement (represents interest earned over the actuarial estimate)	840
(c) Balance of cash donated by J. Stark, the net income from which to supplement Library operations	12,000
(d) Undistributed balance of cash received from J. Stark investments and apartment rents	3,000

4. Buildings	
(a) For general operations	235,000
(b) Apartment building donated by J. Stark on July 1, 1958. Net income to be used in the operation of the Library. Cost of completion to Stark, July 1, 1948, $96,000 (exclusive of cost of land) with estimated life of 50 years, no salvage. Appraised value on July 1, 1958	90,000
5. Equipment	
(a) For general use	280,000
(b) Apartment furniture purchased with donated cash, October 1, 1958, estimated life 10 years, no salvage. Cost	36,000
6. Streets and curbs built by special assessment funds in prior years. (All collected.) The City contributed one-third of the cost	300,000
7. Land	
(a) For general use	60,000
(b) For apartment building site	10,000
8. Supplies	
(a) For general operation	1,800
(b) For apartment house operation, purchased by income cash	300
(c) Originally purchased for general operation, were transferred to and used in library operations; no settlement has been made	2,400
9. Vouchers Payable—for general operations	16,000
10. 3%-30 year bonds payable, due on December 31, 1976. (Issued for purchase of land, buildings and equipment)	400,000

Required:

List the funds or group titles that would be required for the City on the basis of the above information, leaving at least 15 lines between each title. Under each title make one summary journal entry that will record all of the required accounts and amounts in the appropriate fund.

Solution to Problem 1

ACE PUBLISHING COMPANY
COMPARISON OF COSTS OF OPERATION WITH AND WITHOUT PRINTING

	Last Year's Costs	*Additional Costs*	*Eliminated Costs*	*Additional Income*	*Cost Without Printing*
Printing Department:					
Salaries and wages	$ 150,000		$133,000		$ 17,000
Telephone and telegraph	3,700		2,450		1,250
Materials and supplies	250,000		250,000		
Occupancy costs	80,000				80,000
General and administrative	30,000		5,000		25,000
Depreciation	40,000		40,000		
Total	$ 553,700		$430,450		$ 123,250
Shipping Department:					
Salaries and wages	$ 25,000		$ 22,000		$ 3,000
Telephone and telegraph	300		50		250
Materials and supplies	10,000		5,000		5,000
Occupancy costs	10,000				10,000
General and administrative	4,000				4,000
Depreciation	5,000		5,000		
Total	$ 54,300		$ 32,050		$ 22,250
Publishing Department:					
Total operating costs	$ 457,000				$ 457,000
Cost of outside printing		$550,000			550,000
Termination pay (1/5 of ¼ of ($133,000 +$5,000+$22,000))		8,000			8,000
Rental income				$50,000	(50,000)
Additional personnel		4,000			4,000
Investment income (5% of (300,000 −[¼ of ($133,000+$5,000+$22,000)]))				13,000	(13,000)
	$ 457,000	$562,000		$63,000	$ 956,000
Total costs of all departments	$1,065,000				$1,101,500

Summary:

Total costs without printing	$1,101,500
Total costs with printing	1,065,000
Cost of discontinuance of printing	$ 36,500

Solution to Problem 2

THE THOMAS MANUFACTURING COMPANY
STATEMENT OF APPLICATION OF FUNDS
JANUARY 1, 1958 TO DECEMBER 31, 1958

Funds were Provided by:		
Operations:		
Net income	$ 2,500	
Depreciation charged against net income	123,500	
Bond discount charged against net income	400	$126,400
Sale of capital stock:		
Par value	$300,000	
Less discount	30,000	270,000
Sale of bonds		50,000
		$446,400
Funds were Applied to:		
Purchase buildings		$250,000
Purchase machinery		134,500
Purchase bond investment		3,000
Payment of dividend		8,000
Increase working capital (See schedule)		50,900
		$446,400

THE THOMAS MANUFACTURING COMPANY
STATEMENT OF CHANGES IN WORKING CAPITAL
JANUARY 1, 1958 TO DECEMBER 31, 1958

	12-31-58	*12-31-57*	*Increase or (Decrease)*
Current Assets:			
Cash in bank	$ —	$ 8,000	$(8,000)
Cash on hand	2,000	1,000	1,000
Accounts receivable—net	175,500	89,700	85,800
Notes receivable—trade	21,000	27,000	(6,000)
Inventories	210,000	218,000	(8,000)
Unexpired insurance	1,200	1,400	(200)
Total	$409,700	$345,100	
Current Liabilities:			
Accounts payable	$ 58,000	$ 52,000	$(6,000)
Bank overdraft	4,000	—	(4,000)
Notes payable—trade	9,000	10,000	1,000
Bank loans—short term	5,500	6,800	1,300
Accrued interest	10,000	6,000	(4,000)
Accrued taxes	5,000	3,000	(2,000)
Total	$ 91,500	$ 77,800	
WORKING CAPITAL	$318,200	$267,300	$50,900

THE THOMAS MANUFACTURING COMPANY
STATEMENT OF CASH FLOW
JANUARY 1, 1958 TO DECEMBER 31, 1958

Cash was Provided by:	
Operations (See note 2)	$ 65,800
Sale of bonds	50,000
Sale of capital stock	270,000
Bank balances (decrease)	11,000
	$396,800
Cash was Applied to:	
Purchase buildings	$250,000
Purchase machinery	134,500
Purchase bond investments	3,000
Payment of dividend	8,000
Payment of bank loans	1,300
	$396,800

NOTE 1

The following is an analysis of the retained earnings account:

Balance 12-31-57		$783,800
Net income for 1958		2,500
		$786,300
Dividend paid	$ 8,000	
Machinery scrapped	1,200	9,200
		$777,100
(The difference between the figure $777,100 and the 12-31-58 balance, $240,000, must have come about by the following items.)		
Write-off of goodwill	$230,000	
Write-off of land	10,000	240,000
Balance 12-31-58		$537,100

NOTE 2

Cash from operations:			
Sales		$1,250,000	
Accounts receivable, 12-31-57		92,000	
Notes receivable, 12-31-57		27,000	
		$1,369,000	
Accounts receivable, 12-31-58	$180,000		
Notes receivable, 12-31-58	21,000	201,000	
Cash from customers			$1,168,000
Material and supplies		$ 250,000	
Accounts payable, 12-31-57		52,000	
Notes payable, 12-31-57		10,000	
		$ 312,000	
Decrease in inventories	$ 8,000		
Accounts payable, 12-31-58	58,000		
Notes payable, 12-31-58	9,000	75,000	
Cash paid to suppliers			$ (237,000)
Direct labor			(210,000)
Manufacturing overhead		$ 181,500	
Unexpired insurance, 12-31-58		1,200	
Accrued taxes, 12-31-57		3,000	
		$ 185,700	
Unexpired insurance 12-31-57	$ 1,400		
Accrued taxes, 12-31-58	5,000	6,400	(179,300)

Selling expense			(245,000)
General expense		$ 230,000	
Allowance for bad debts, 12-31-57		2,300	
		$ 232,300	
Allowance for bad debts, 12-31-58		4,500	(227,800)
Interest expense (net)		$ 7,500	
Accrued interest, 12-31-57		6,000	
		$ 13,500	
Decrease in bond discount	$ 400		
Accrued interest 12-31-58	10,000	10,400	(3,100)
			$ 65,800

Solution to Problem 3

THE WALSCH COMPANY

a. *Schedule of Equivalent Labor Production:*

Finished units	67,000
Partially complete:	
Ready for part Y assembly: 3,000 units (62½% complete)	1,875
Ready for painting: 5,000 units (87½% complete)	4,375
	73,250

b. *Total and Unit Costs Incurred in Production:*

	Material K	*Part X*	*Part Y*	*Paint*	*Direct Labor*	*Mfg. Expense*	*Total*
Total expenditures in October	$25,000	$16,000	$15,000	$ 1,072	$45,415	$24,905	
Raw material in inventory at 10-31	(1,450)	(1,000)	(600)				
Total cost of production	$23,550	$15,000	$14,400	$ 1,072	$45,415	$24,905	$124,342
Equivalent production—material:							
Placed in process	75,000	75,000	75,000	75,000			
No. of units ready for part Y assembly			(3,000)	(3,000)			
No. of units ready for paint				(5,000)			
Equivalent production—labor and overhead					73,250	73,250	
Total	75,000	75,000	72,000	67,000	73,250	73,250	
Unit cost of production	$ .314	$ .20	$ .20	$ .016	$ .62	$ .34	$ 1.69

c. *Detail of Work in Process Inventory:*

1) 3,000 units ready for part X assembly:							
Material	$ 942.00	$ 600.00					
Labor (3,000×(62½% of $.62))					$ 1,162.50		
Mfg. expense (3,000×(62½% of $.34))						$ 637.50	
	$ 942.00	$ 600.00			$ 1,162.50	$ 637.50	$ 3,342.00
2) 5,000 units ready for paint:							
Material	$ 1,570.00	$ 1,000.00	$ 1,000.00				
Labor (5,000×(87½% of $.62))					$ 2,712.50		
Mfg. expense (5,000×87½% of $.34))						$ 1,487.50	
	$ 1,570.00	$ 1,000.00	$ 1,000.00		$ 2,712.50	$ 1,487.50	$ 7,770.00
Total work in process inventory	$ 2,512.00	$ 1,600.00	$ 1,000.00		$ 3,875.00	$ 2,125.00	$11,112.00

Solution to Problem 4

a. Calculation of Cost—Retail Ratio and Inventory Shrinkage:

	Cost	*Retail*	*Per Cent of Cost to Retail*
Opening inventory	$ 350,600	$ 590,000	
Purchases	1,774,019	3,280,000	
Loading	124,181		
Additional mark-up		40,000	
Total	$2,248,800	$3,910,000	57.51%

Deduct:			
Net sales ($3,055,400 − $244,400)		$2,811,000	
Net mark downs ($116,000 − $5,000)		111,000	
Total		$2,922,000	
Remainder		$ 988,000	
Ending inventory	$547,495	952,000	57.51%
Shrinkage, at retail		$ 36,000	

Adjusting Journal Entries

(1)

Cost of sales—cost dept.	$ 31,000	
Cost of sales—retail dept.	1,701,305	
Inventory—cost dept.	4,200	
Inventory—retail dept.	547,495	
Purchases		$1,930,000
Opening inventory		354,000

To record ending inventory and cost of sales as follows:

	Retail Dept.	*Cost Dept.*
Opening inventory plus purchases	$2,248,800	$35,200
Ending inventory	547,495	4,200
Cost of sales including shrinkage	$1,701,305	$31,000

(2)

Loading account	$12,881	
Reserve for loading		$12,881

To adjust the reserve for loading included in ending inventory:

Ending inventory including loading	$547,495
Ending inventory without loading ($547,495 ÷ 107%)	511,678
Loading in ending inventory	$ 35,817
Reserve balance before adjustment	22,936
Adjustment to reserve	$ 12,881

(3)

Reserve for shrinkage	$24,000	
Shrinkage		$24,000

To reverse the provision for shrinkage.
The cost of shrinkage is absorbed in the valuation of the ending inventory.

b.

OMEGA BROTHERS COMPANY
PROFIT AND LOSS STATEMENT WORKSHEET
FOR THE YEAR ENDED JANUARY 31, 1959

	Balances Before Adjustment		*Adjusting Journal Entries*		*Adjusted Profit and Loss Balances*	
	Dr.	*Cr.*	*Dr.*	*Cr.*	*Dr.*	*Cr.*
Sales		$3,185,400				$3,185,400
Returned sales	$ 250,000				$ 250,000	
Inventory at 2-1-58	354,000			(1) $ 354,000		
Purchases	1,930,000			(1) 1,930,000		
Provision for inventory shrinkage	24,000			(3) 24,000		
Loading account		124,181	(2) $ 12,881			111,300
Administrative expenses	198,000				198,000	
Occupancy expenses	260,000				260,000	
Publicity expenses	136,000				136,000	
Buying expenses	96,000				96,000	
Selling expenses	420,000				420,000	
Leased department income		35,000				35,000
Cost of sales—cost dept.			(1) 31,000		31,000	
Cost of sales—retail dept.			(1) 1,701,305		1,701,305	
Inventory—cost dept.			(1) 4,200			
Inventory—retail dept.			(1) 547,495			
Reserve for loading		22,936		(2) 12,881		
Reserve for shrinkage		24,000	(3) 24,000			
Net income					239,395	
					$3,331,700	$3,331,700

Solution to Problem 5

General Fund

Taxes receivable—1958 and prior years	$ 21,900	
Petty cash	3,000	
Cash in banks	15,000	
Supplies	1,800	
Due from other funds for supplies	2,400	
Reserve for uncollectible taxes		$ 2,190
Vouchers payable		16,000
Reserve for stores		4,200
Operating surplus		21,710

Sinking Fund

Securities	$136,680	
Cash	840	
Fund balance		$137,520

Stark Library Fund

Securities	$ 65,400	
Cash	15,000	
Apartment building	90,000	
Equipment	36,000	
Land	10,000	
Supplies	300	
Over-expenditure of income (See note)	1,125	
Allowance for depreciation—building		$ 1,125
Allowance for depreciation—equipment		900
Due to General Fund		2,400
Fund balance—principal		213,400

Fixed Property and Bonded Debt

Buildings	$235,000	
Equipment	280,000	
Improvements—paid by city	100,000	
Land	60,000	
Bonds payable		$400,000
Fund balance		275,000

NOTE:

The principal of the Stark donation is computed as follows:

Securities	$65,400
Cash (of which $36,000 was used to purchase equipment)	48,000
Apartment building	90,000
Land	10,000
Trust principal	$213,400

If only the net income was to be used for the operation of the library there has been an invasion of principal to the extent of $1,125.

EXAMINATION IN THEORY OF ACCOUNTS

CHARLES T. ZLATKOVICH

THE examination in theory of accounts of the November, 1959, Uniform C.P.A. Examination was given Friday afternoon, November 6, from 1:30 to 5:00 P.M. There were two groups of questions as follows:

	Estimated Minutes	
	Minimum	*Maximum*
Group I (All Required):		
No. 1	10	15
No. 2	15	25
No. 3	20	30
No. 4	25	35
No. 5	25	35
No. 6	25	35
Total for Group I	120	175
Group II (One required)	25	35
Total for examination	145	210

The estimated time allowances are approximately proportional to the point values of the questions, the total of which for this examination is 100.

GROUP 1

(Answer all questions in this group.)

Number 1 (Estimated time—10 to 15 minutes)

a. What is accounting for depreciation, and what is its objective?

b. Are the *decreasing charges* methods of depreciation consistent with this objective? *Discuss fully.*

Answer 1

a. Accounting for depreciation is the process of allocating the cost of plant assets of limited life over their estimated useful lives. The chief objective is to charge against each period's revenue its fair share of the depreciable portion of the cost of such assets. This portion is original cost minus any expected scrap or trade-in value. The time period is affected by obsolescence to the extent predictable, by accidents, by repair and maintenance policy, by extent of asset usage, and other factors. Units such as output or mileage rather than a figure based on time may serve as a denominator factor in determination of the periodic depreciation charge. Recording depreciation also makes it feasible to report assets at cost less accumulated depreciation on the balance sheet.

b. Decreasing charge methods such as sum-of-year's-digits or fixed per cent on diminishing base are consistent with this objective. Once selected, such a method is systematic, not arbitrary. Appropriateness of the selection depends on circumstances of asset use. Where the expected earning power or productivity is greater in earlier years of asset usage, or where expected maintenance costs will be heavier in later years, such methods seem quite appropriate and rational. Many plant assets are subject to these characteristics.

Number 2 (Estimated time—15 to 25 minutes)

A portion of the combined statement of income and retained earnings of X Corporation for the current year appears at the top of the next page.

At December 31, X Corporation had outstanding 7,000,000 shares of $10 par common stock and 50,000 shares of 6% preferred.

On April 1 of the current year X Corporation had issued 1,000,000 shares of common stock for $32 per share to help finance the bond retirement.

Required:

a. Compute the earnings per share of

Net Operating Income		$ 37,220,000
Add: Other Income (net)		260,000
Net Income before income taxes		37,480,000
Provision for Income Taxes (before tax saving of $1,755,000 applicable to extraordinary loss on bond retirement charged to retained earnings)		19,482,700
Net Income		17,997,300
Add: Retained Earnings at beginning of year		99,162,700
Total		117,160,000
Deduct:		
Loss on retirement of bond issue prior to maturity (includes call premium, unamortized bond discount, and unamortized bond issue costs)	$ 3,375,000	
Less: Income Tax saving applicable to loss	1,755,000	
Net Loss	1,620,000	
Dividends Declared:		
On Common Stock (at $.50 per quarter)	13,500,000	
On Preferred Stock	300,000	15,420,000
Retained Earnings at end of year		$101,740,000

common stock for the current year that should be reported to stockholders. *Explain* the reasons for computing it in your particular way.

b. Draft a paragraph suitable for inclusion in the annual report of the Corporation with reference to earnings per share. Earnings per share of common stock in the immediately previous year were $1.86.

Answer 2

a. Existence of the preferred stock issue reduces income available for common stockholders; preferred dividend requirements must be deducted as a first step. The next problem is determination of an appropriate divisor—a problem complicated by the fact of issuance of additional common shares during the year. The most equitable solution to this problem is calculation of a weighted average of common shares outstanding.

Net Income	$17,997,300
Deduct 6% dividend on preferred stock	300,000
Net Income available for common stockholders	$17,697,300

Computation of weighted average of common shares outstanding

	Months	× *No. Shares*	= *Product*
January 1 to April 1	3	6,000,000	18,000,000
April 1 to December 31	9	7,000,000	63,000,000
	12		81,000,000

81,000,000 ÷ 12 = 6,750,000 Average number of common shares outstanding.

$$\text{Earnings per share} = \frac{\$17,697,300}{6,750,000} = \$2.62 \text{ per share.}$$

Because of the materiality of the extraordinary loss (excluded from computation of net income) the foregoing figure should be supplemented by a calculation of the extraordinary loss per share.

$$\text{Extraordinary loss per share} = \frac{\$1,620,000}{6,750,000} = \$.24 \text{ per share.}$$

b. Based on the average number of common shares outstanding during the current year ordinary net income per share amounted to $2.62; a comparable figure for last year is $1.86. Retirement of bonds prior to maturity during the current year resulted in a large extraordinary loss. Expressed on a per share basis, this loss amounted to $.24. This extraordinary loss was charged to retained earnings rather than shown on the income statement. Earnings per share would have amounted to $2.38 per share had the latter treatment been followed.

Number 3 (Estimated time—20 to 30 minutes)

At December 31, 1958, the annual report of Petroleum Corporation contained the

following item and accompanying explanation in a "Reserves" section immediately preceding the "Stockholders' equity" section:

Contingencies (Note 8)	$7,396,604

Note 8: This item, which has been provided for general undetermined contingencies, had the following changes in 1958:

Balance, December 31, 1957	$8,399,886
Charges to current income	466,400
	8,866,286
Restored to income	1,424,619
Payment for which the Reserve was established	45,063
Balance, December 31, 1958	$7,396,604

Required:

a. Give your opinion of the accounting practices which are indicated by this balance sheet item and the accompanying note.

b. Indicate the effect of these accounting practices upon the comparative financial statements.

Answer 3

a. Use of a separate "Reserves" section between Liabilities and Capital is a questionable practice and has been looked on with disfavor by authoritative accounting bodies. In this case the practice is even less supportable because it has been used to caption a reserve for general undetermined contingencies. If used at all, such reserves should be created by direct charges to retained earnings and reductions therein should be returned directly to this source; in no event should changes in this type of reserve affect determination of net income. Losses or costs associated with contingencies such as the reserve is intended to measure and anticipate should not be charged against the reserve.

Here all changes in the reserve have affected income; the reserve has been increased by an offsetting $466,400 charge to income and has been decreased $1,469,682 by a restoration to income and by a $45,063 charge which apparently should have been made to income instead of to the reserve.

b. Income reported for 1958 has been increased by $1,003,282 as a result of improper use of the reserve. While total income of Petroleum Corporation is not given, it seems likely that $1,003,282 is a material amount. This seems especially likely when compared to $45,063—an apparently proper charge to income. Hence, comparability of 1958 income with that of other years is seriously impaired.

There is considerable doubt that income of earlier years has been properly determined in that the reserve for general undetermined contingencies had grown to $8,399,886 by December 31, 1957. If similarly objectionable practices have been followed in earlier years, the net income of these years is understated an aggregate or net amount of $8,399,886. Determination of appropriate standards by which the adequacy of any single year's provision of a reserve for general undetermined contingencies may be judged is most difficult; verifiable, objective evidence is hard to come by; hence the amounts are likely to reflect whim or unsupported judgement. For such judgements to affect the income of successive years is especially bad.

Number 4 (Estimated time—25 to 35 minutes)

The total owners' equity (excess of assets over liabilities) is usually shown under a number of sub-captions on the balance sheet of a corporation.

Required:

a. List the major subdivisions of the "stockholders' equity" section of a corporate balance sheet and describe briefly the nature of the amounts that will appear in each section.

b. Explain fully the reasons for subdividing the amount of stock-holders' equity, including legal, accounting and other considerations.

c. Describe four different kinds of transactions that will result in paid-in or permanent capital in excess of legal or stated capital.

d. Various accounting authorities have recommended that the terms "paid-in surplus" and "earned surplus" not be used in published financial statements. ***Explain*** briefly the reason for this suggestion, and ***indicate*** acceptable substitutes for the terms.

Answer 4

a. In the case of unconsolidated balance sheets, authorities agree there should be at least three major subdivisions of corporate capital on a balance sheet. These, in turn, are often subdivided. These are (1) paid in capital, (2) retained earnings, and (3) revaluation or appraisal increment. Some would add a fourth caption—donated surplus.

1. Paid-in capital consists principally of the contributed capital from shareholders for their stock. In the case of stock with par or stated value there will often be a separate showing of premiums or amounts paid in excess of stated value. Changes may occur as a result of retirement of shares or by virtue of stock dividends. Paid-in capital may also result from forfeiture of amounts paid in by subscribers. Some contend that donations by stockholders should be treated as paid-in capital while others would set this out separately as donated surplus. In any event amounts received from stockholders in payment of assessments increase paid-in capital.

2. Retained earnings represent the excess of cumulative income over losses and dividends. Unless appropriated or restricted, a single balance may appear. However, as a result of setting up various reserves, retained earnings must often be shown under two captions—appropriated and free.

3. Appraisals or revaluations of assets often give rise to an unrealized credit balance. This increment, unless amortized when appraised assets are depreciated or unless capitalized by means of a stock dividend, may remain more or less permanently on the books.

4. Donations from outsiders give rise to a credit balance which is sometimes shown separately as donated surplus. As noted above, some authorities advocate crediting donations from stockholders to donated surplus.

In the case of consolidated balance sheets certain items not discussed above may appear under capital. The excess of book value of a subsidiary's assets over cost of its stock is sometimes set out separately under paid-in capital. Under the entity theory of consolidations, minority interests in subsidiaries consolidated appear in the capital section.

Holding of its own uncancelled shares which had been issued previously (treasury stock) gives rise to a contra amount which may be set out as a single figure (cost) or may be allocated as a deduction from several elements of positive capital.

b. Capital is subdivided to disclose its sources and certain restrictions which may apply. Under incorporation laws of various states, different elements of capital may be available for cash or stock dividends while other elements are required to be kept more or less intact and shown separately. Restrictions may be self-imposed such as by agreement with creditors to provide a Reserve for Sinking Fund; they may be non-contractual—for example, the directors may decide to set up a Reserve for Plant Expansion; both reserves have the effect of reducing potential dividend distributions.

c. Four different transactions resulting

in paid-in capital in excess of stated capital:

1. Issuance of shares at a premium or excess over stated value.

2. Forfeitures of amounts paid in by would-be stockholders.

3. Assessments or donations paid in by stockholders.

4. Capitalization of a greater amount of retained earnings than the par or stated value of shares issued as a stock dividend.

d. The term "surplus" connotes to laymen an excess over needs; hence it is possible they will think a corporation does not really need amounts represented by premiums or excess over stated value or by income retained in the business. If instead of characterizing such amounts as some kind of "surplus," they are described as "Capital contributed in excess of par or stated value of stock" or as "Accumulated earnings reinvested in the business" or "Retained earnings" the misleading inference is avoided.

Number 5 (Estimated time—25 to 35 minutes)

In negotiations for the sale of a going business an intangible factor called "Goodwill" is sometimes estimated by capitalizing average excess earnings, that is, by dividing average excess earnings by an assumed "earnings rate" factor.

Required:

a. Explain how the average excess earnings are determined.

b. What is the justification for the use of this method of estimating goodwill?

c. Under what circumstances is it appropriate to record goodwill in the accounts?

d. How, if at all, should goodwill, properly recorded on the books, be amortized in order to conform with generally accepted accounting principles?

Answer 5

a. A first step is to exclude from income the effects of non-operating and non-recurring transactions. Valuations of the income-generating assets are then checked for adequacy. Regular operating income for several periods is divided by average capital (adjusted for adequacy of asset valuations); the resultant quotient is a rate of return which must then be measured against some standard rate to determine whether earnings have been in excess of normal for such an enterprise.

b. If the rate of return is determined to be normal, any excess payment for an enterprise reflects something other than Goodwill, such as under-valuation of its assets. If on the other hand the rate of return is above normal and expected to continue, then any excess payment is probably for this excess and is commonly recorded as Goodwill. Determination of goodwill is usually based on purchase of a certain number of years' excess earnings or by dividing the amount of average excess earnings for a year by some agreed rate of capitalization. There must be agreement between the parties on the number of years or on the rate of capitalization before either of these essentially similar methods can be used.

c. Goodwill is properly recorded when, as stated above, an excess payment has been made based on agreed purchase of prospective excess earnings. It would not be proper to charge an excess payment to Goodwill when it was made because of some factor other than excess earnings, such as undervaluation of assets. Goodwill should only be recorded when purchased; it should not be set up as a result of an appraisal.

d. If the excess earnings which were the basis of the Goodwill computation are not expected to continue indefinitely, the Goodwill should be amortized. Normally

the charge off should be made against income. About the only circumstance in which the amortization charge can by-pass income is in the event it becomes necessary (on the basis of hindsight) to write off such large amounts in a single year that income would be distorted.

Number 6 (Estimated time—25 to 35 minutes)

You have been requested by the Karol Company to assist them in determining the desirability of a proposed plan of "self-insurance" against the risk of loss by fire. (Disregard any income tax considerations.)

Required:

a. Explain what is meant by "self-insurance," and why it might be used.

b. *List* and *explain* the factors that affect the advisability of adopting a self-insurance plan.

c. Describe briefly *two* possible ways of accounting for such a plan, including for each way illustrative journal entries to:

(1) record the start of the plan,
(2) record a fire loss incurred.

d. Which of the two ways do you prefer? *Explain fully.*

Answer 6

a. Self-insurance contemplates the absorption of losses which could be passed to an insurance company by purchase of a policy covering that type of risk. A self-insurance program usually involves the making of journal entries prior to the loss but does not ordinarily involve disbursements to a fund to cover expected losses; there are no disbursements to outsiders until a loss or replacement of damaged assets occurs.

There is some question whether it is insurance at all since no indemnity will be received in the event of loss. It might be used because a large organization in which potential losses are well diversified expects its actual losses to be less than premium payments over an extended period.

b. Unless answers to most of the following questions are affirmative self-insurance is inadvisable:

1. Are risks and potential losses fairly well spread geographically and/or over a relatively sizeable "population"?

2. Does the organization have the financial ability to absorb losses, replace destroyed assets, or pay liabilities that are likely to eventuate?

3. Will the same protective measures be adopted as would be required if regular insurance were carried?

4. Does it appear probable there will be substantial net savings over an extended period?

5. Is it legal to be one's own risk bearer or do contracts or statutes require that regular insurance be carried?

c. Two different ways of accounting for self-insurance are (1) the reserve method and (2) the specific charge-off method.

Under the reserve method entries would be made as follows:

Start of Plan (and periodically thereafter)

Insurance expense	$xxx	
Reserve for self-insured losses		$xxx

To record imputed expense in lieu of premium payments.

Entry to record fire loss

Reserve for self-insured losses	$40,000	
Accumulated depreciation—Building	20,000	
Building		$60,000

To write off book value of building destroyed by fire and included in company's self-insurance plan.

Entries under the specific charge-off plan would be as follows:

Start of Plan

No formal entry, but a memo entry detailing principal provisions of plan and a statement that losses will be charged to income when they occur.

Entry to record fire loss

Fire loss	$40,000	
Accumulated depreciation—Building	20,000	
Building		$60,000

To write off book value of building destroyed by fire and included in company's self-insurance plan.

This second method could be accompanied by a plan of appropriating retained earnings. In this event, in addition to the foregoing entries, appropriation of retained earnings equal to expected losses for the year would be made at the time the plan is inaugurated. At the time of the loss part of the balance transferred to the reserve might be returned to retained earnings as follows:

Reserve for self-insurance	$40,000	
Retained earnings		$40,000

d. Each method has certain advantages. The first charges some expense to each period; while fire losses do not accrue, better comparability with companies carrying conventional insurance is achieved. In the case of a self-insurance program covering losses that do accrue (such as workmen's compensation) the first method seems superior. It also has the advantage of calling attention to the self-insurance program because of the balance sheet account.

On the other hand, the second method also has certain advantages. As noted, fire losses do not accrue; hence losses are recognized only as they eventuate. Another advantage of the second method is avoidance of the troublesome question of how to caption the balance in the Reserve for Self-Insured Losses in the balance sheet. It is not a valuation reserve and, in the case of fire risks, is not a liability item either. Since it was created by a charge against income, there is some objection to classifying it as capital, though this is probably the best treatment. An even more troublesome problem arises if early losses should cause the reserve to have a debit balance. On the other hand, the second method (unless coupled with appropriation of retained earnings), does not give rise to balances which must be set out on the balance sheet and disclosure must depend on footnotes.

The first method seems superior for self-insurance programs involving payments for losses themselves (e.g. workmen's compensation), in which case the reserve should be captioned as a liability. The second method seems superior where payment is for replacement of an asset (e.g. fire losses) provided there is disclosure on the balance sheet through a surplus reserve or by footnotes. Since the primary context of the question involves fire losses, the second method is preferable.

GROUP II

(*Estimated time—25 to 35 minutes.*)

(Answer one of the two questions in this group. If both are answered only the first will be considered.)

Number 7

It has been said that "Income determination is now based on a questionable concept which, for companies with a large investment in plant and equipment, distorts reported income unfavorably when prices are rising and favorably when prices are falling."

Required:

a. Explain fully the principal arguments used by those expressing the foregoing view.

b. What specific changes in presently accepted methods of determining income have been recommended by supporters of this view? *Explain fully*, including illustrations if appropriate.

c. What are the arguments used by those opposing the foregoing view?

Answer 7

a. Persons expressing this view contend

that income is overstated when prices are rising with a resultant overpayment of income taxes. This is due to the recording of depreciation on a (lower) original cost basis rather than on a current or replacement cost basis. They contend that if dividends approximately equal earnings thus measured, there will not be sufficient funds to replace fixed assets. They contend further that all other costs and expenses tend to reflect current conditions; i.e., that expirations of prepayments, payments such as wages and utility bills, consumption of supplies, cost of goods sold, etc., are in terms of current price levels. On the other hand, they point out that depreciation costs are based on price levels which prevailed years ago and may therefore be substantially lower. This results in a curious and unrealistic matching of two kinds of costs with revenue measured in terms of current prices. When income is overstated, there are pressures for increased wages based on better ability to pay. There may also be pressures for increased dividends because it is not recognized that the excess earnings must be retained in order to maintain the same size of physical plant. According to this same viewpoint, in the event prices fell, more or less the opposite effects would be felt, i.e., income would be understated and income taxes would be too low because depreciation would be overstated.

b. Proponents of the viewpoint set out in (a) have made numerous suggestions for changing traditional methods of determining income. Their principal proposals may be summarized as follows:

1. Use index numbers to convert the depreciation charge based on historical costs to current costs.

2. Reflect assets at appraised values and base depreciation on these values.

3. Calculate an additional charge sufficient to raise depreciation to current or replacement cost levels. Some would reflect this as an appropriation of net income, others as a separate item used in determination of net income.

4. Restate all non-monetary items in the statements by means of index numbers. Probably the most comprehensive plan for achieving this was developed in the 1930's; it was called "stabilized accounting."

Explanation of Items Nos. 1–4:

1. After an appropriate price index is selected (most proponents seem to prefer one which measures general purchasing power as opposed to a specific one such as construction costs), the current value is used as a numerator and the value prevailing when the asset was acquired as a denominator. This fraction is multiplied by the depreciation charge calculated on cost. Suppose a depreciable asset was acquired when the index was 120 and the current value is 150; a depreciation charge of \$6,000 based on cost would become \$7,500.

2. Revaluation would be necessary after each substantial change in price levels or replacement costs of depreciable assets. If an asset which cost \$100,000 had been depreciated 30% and was appraised at \$150,000 new, \$50,000 would be added to the asset value, \$15,000 to its valuation account, and \$35,000 to Appraisal Surplus. Depreciation of 5% in the following year would result in a \$7,500 depreciation charge, possibly also in a \$2,500 transfer from Appraisal Surplus to Retained Earnings.

3. Through use of index numbers or current appraisals of replacement values, the "deficiency" of the depreciation charge based on cost would be made up by a charge to an account which would either be treated as an appropriation of income or as a charge to income. The offsetting credit might be handled as an addition to the asset valuation account or as a special capital account.

4. Time does not permit demonstration

of stabilized accounting. Two general techniques exist—(a) Balance sheet stabilization, and (b) Stabilization of each transaction.

c. Principal arguments in opposition to changing traditional methods include:

1. Traditional methods are uniform, objective, and widely understood; if they have limitations, these are known and recognized. On the other hand, as evidenced above, there is little agreement as to methodology, choice of measures, etc. The resultant confusion to users of statements would be worse than the defect sought to be cured. Statements of similar enterprises would no longer be comparable unless both used the same method and measures.

2. While demonstrated over-all solutions are usually fairly satisfactory for statements of a single year, many of them are distinctly unsatisfactory for statements of consecutive years, especially if prices have continued to change.

3. Tax relief is not dependent on accounting as evidenced by the following differences which may exist as between records and tax returns:

(a) Cash vs. accrual
(b) Installment basis vs. other bases
(c) Amortization of emergency facilities vs. regular depreciation

If no tax relief is realized (as proponents seem to hope for) no additional dollars for replacement of assets are generated.

4. Actual depreciation is measured by past cost incurred, not by some would-be cost arrived at by means of index numbers, appraisals, or other means. Even LIFO, often cited as a parallel in support of change, does not charge more to cost than actual total past cost incurred.

5. Confining adjustments to fixed assets and to depreciation is a piecemeal approach. As an example, utilities which finance much of their plant through issuance of bonds and preferred stock are in a much different position from industrial companies whose equity accounts are largely current liabilities and common stock.

6. Replacement of assets at higher cost is essentially a financial problem, and no amount of extra depreciation will fundamentally solve it. Assets for replacement are generated through revenue, not through the depreciation charge.

7. Under modern technology, long-lived fixed assets are usually replaced by dissimilar assets with greater efficiency; beyond this it is difficult to make predictions about replacements or conditions which will prevail when they occur.

Number 8

XZ Mining Company was recently formed by the issuance of 80,000 shares of $1 par value stock, sold on the open market for $5 per share. The proceeds were used to purchase undeveloped mineral properties. Because of other mineral discoveries in the general area of the company's properties, the price of the company's stock rose to bid $10—ask $12, and with brisk trading remained at that level.

In order to develop these properties the company needed additional funds. It had been unable to place a $2,000,000 debenture issue even though an 8% interest rate was offered. Accordingly, in order to place the issue, it was necessary to sell units composed of a $1,000 debenture with 10 shares of common stock attached for $1,010. The debentures bear a 6% interest rate and are due at the end of 5 years. The total proceeds of the issue amounted to $2,020,000.

The units carried a requirement that the attached common stock could not be sold separately from the unit for at least thirteen months. Required:

a. Compute the unit values to be assigned to,

1. The debentures, and
2. The common stock,

taking into account both the dilution fac-

tor and the restriction on the common stock. For this purpose you may assume a 15% dilution factor and 10% for the restriction on common stock.

b. Give the journal entry to record the sale of the units, disregarding any commissions and other direct expenses of issuance.

c. Indicate the proper amounts and method of presentation of each of the items relative to this issue as they would appear in the financial statements at the end of the first year the issue is outstanding. *Explain.* (You may assume that the effective rate of interest on the issue is 8%.)

Answer 8

a. The first problem is selection of a basic per share value for the stock to which to apply the reduction factors. Three different values might be used as a starting point—the $12 (ask) price, the $10 (bid) price, or $11, the average of the two. Calculations below are based on $12 per share; the procedure would be the same if another value were used.

Current value per share		$ 12.00
Deduct:		
Dilution factor estimated at 15%	$1.80	
Restriction factor estimated at 10%	1.20	3.00
Value in security package transaction		$ 9.00
Total price of one debenture and ten shares		$1,010.00
Deduct value of ten shares as calculated		90.00
Theoretical value of debenture alone		$ 920.00

b. Required entry:

Cash	$2,020,000	
Discount on debentures payable	160,000	
Debentures payable		$2,000,000
Capital stock (unissued)		20,000
Premium on capital stock		160,000

c. Since an *effective* rate of interest is given, impliedly scientific or compound interest amortization rather than the straight line method should be used. The amount borrowed, $1,840,000 multiplied by 8% gives an interest expense of $147,200 which would be shown on the income statement. The nominal interest, paid or accrued, is 6% of $2,000,000 or $120,000. The $27,200 difference between these two interest amounts represents amortization of the debt discount, leaving $132,800 unamortized at end of the first year. While this balance could be shown under a Deferred Charges caption, preferably it should be deducted from Debentures Payable under Long Term Debt. The capital section would be as follows:

Capital stock, $1 par value, 100,000 shares issued and outstanding	$100,000	
Premium on capital stock	480,000	
Total stockholders' equity		$580,000

Any portion of the nominal interest not paid at balance sheet date would be shown as a current liability.

AMERICAN ACCOUNTING ASSOCIATION

NEWS

EDITOR'S NOTE

This section of The Accounting Review is an expansion of the customary Association Notes department and is designed to bring more information about the Association and its activities to the general membership. For the present, it is intended as an experiment. Any thoughts or suggestions you may have or any news items for subsequent issues should be forwarded to R. K. Mautz, 218 David Kinley Hall, University of Illinois, Urbana, Illinois.

PRESIDENTS' MESSAGES

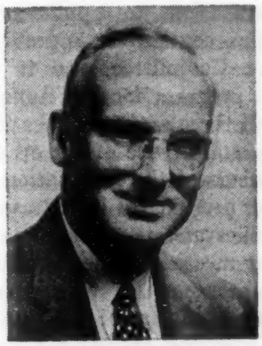
Martin L. Black, Jr.

1959

During 1959, the Association followed the same pattern of operations which has served it so well in the past. General direction of its affairs is provided by the Executive Committee which held two two-day meetings with all members present at both meetings.

The business affairs of the Association are conducted through the office of the Secretary-Treasurer, Carson Cox of Ohio State. Carson was first elected to this position for 1954 and has served continuously since. Editorship of The Accounting Re-

(continued on page 352)



Charles J. Gaa

1960

The effectiveness of the American Accounting Association is judged by its fine Accounting Review, its excellent conventions, and the work of its committees. The first two are more easily understood and judged than is the third. For this reason, a detailed explanation of 1960 committee plans may be helpful.

Committee Structure

The committees created or continued for 1960 by the Executive Committee are listed elsewhere in the *News*. There are

(continued on page 353)

VIEW is provided by Bob Mautz of the U. of Illinois. 1959 was Bob's first year in this position. Except for several clerical workers employed full time in the office of our Secretary-Treasurer, the Association has no full-time employees. Office space for the Secretary-Treasurer and Editor are provided by their respective universities. Honoraria, determined each year by the Executive Committee, are paid to the Secretary-Treasurer and Editor; all other officers and committee members serve without compensation.

The President of your Association has three principal responsibilities: to represent the Association at meetings of and in dealings with other professional and scholarly organizations, to appoint members to the various committees approved by the Executive Committee, and to plan the technical program for the Annual Meeting. In all these activities I have had the able help and advice of the other officers and members of the Association.

As your president, I have traveled some 30,000 miles and represented you before the spring meeting of the Council and the annual meeting of the membership of the American Institute of Certified Public Accountants, the annual meeting of the National Association of Accountants, the Institute of Internal Auditors, and the American Woman's Society of CPA's held in conjunction with the meeting of the American Society of Women Accountants. It was my pleasure to represent the Association at the Twenty-first Annual Ohio State Institute on Accounting and before the Washington Chapter of the Federal Government Accountants Association. In addition, Carson Cox and I attended a meeting in New York to discuss cooperation with representatives from the American Institute of Certified Public Accountants, the National Association of Accountants, and the Controllers' Institute. Meetings, in my capacity as president, with small groups and individuals in education, accounting, and business were too numerous to mention. These many experiences lead to but one conclusion—the American Accounting Association is a respected and valued organization. Its activities and accomplishments are well thought of. And as the strength of any organization lies in its members, you are to be congratulated.

Much of the work of the Association is carried on through committees, the members of which serve without pay. Many hours have been contributed by Association committee members this year to research in accounting theory and educational methods and to furthering the interests of the Association and accounting generally.

The 1959 Annual Meeting was held on the beautiful campus of the University of Colorado and enjoyed the largest attendance in the history of the Association. Registration of members and guests totaled 525, not including wives and children. The largest attendance at any function was 800 for the Monday evening picnic.

Local arrangements were directed by Professor and Mrs. Robert S. Wasley as chairman and chairwoman of the Committee on Arrangements and the Ladies Program Committee. To paraphrase some immortal words: "Never did so few labor so cheerfully to entertain so many so well." The Association is much indebted to the University of Colorado and particularly to the members of its accounting department and their wives for a thoroughly enjoyable convention.

The technical program was well attended and well received. As usual, many of the papers will be published in THE ACCOUNTING REVIEW.

As I look back over my year as president of your association I have a deep feeling of gratitude to a great many—to the other officers who shared with me the burden of

guiding the Association through another year, to those who served so faithfully and well on committee assignments, to those who participated in our technical program and those who made the social aspects of our annual meeting so enjoyable, to all those who helped in so many ways to make this busy year a pleasure and an inspiration for me, and, finally, to all the members of the Association for the honor and opportunity of serving as your president. To all of you, my sincere thanks.

MARTIN L. BLACK, JR.

* * * * *

(President Gaa—from page 351)

four groups of task committees as follows, each of the last three being coordinated by a joint committee: 1. General, 2. Education, 3. Research, 4. Cooperation. Each joint committee has the Director of Research or a Vice President as its chairman, and the membership of each (with the exception of the Committee on Cooperation) is composed exclusively of chairmen of the task committees.

The activity of some old committees had decreased to such a degree that they have been discontinued and will be reactivated only if greater need is demonstrated. However, since these areas are important and represent points of contact with other organizations, the committees have been replaced by liaison representatives who are gathered together on the Joint Committee on Cooperation with Other Organizations. Those discontinued for the foregoing reason are: Faculty Residency, Internal Auditing, Personnel Testing Advisory, and Student Internship. A few words about some of the new committees or those with changes in title may be in order.

The Professional Development Program Advisory Committee has had its scope increased and its name changed to Post-Degree Continuing Education in Accounting. The Committee on Professional Education in Accounting has been discontinued and its potential work has been divided among several education committees, although its direct successor is the Committee on Courses and Curricula—General. The Committee on the Role of the Undergraduate Accounting Major has completed its work and has been discontinued.

The new committees are: (1) Preparation of a Convention Manual. This committee is writing a conventions manual, based upon a study of the files of the AAA and conventions procedures of other organizations. Such a manual should save the time of future presidents and arrangements committees, facilitate the inspection of potential convention sites, and, perhaps, make our conventions even better than they have been in the past. (2) Group Insurance. The immediate job of this committee is to see if there is a need for group life or medical insurance on the part of our members. If investigation discloses such a need, this committee will study the role the AAA might perform in arranging for such insurance. We are fortunate that Mr. Paul Grady, Chairman of the AICPA insurance committee, will assist our committee. (3) Northeastern Group Meeting. A report of its first meeting held late in 1959, is included elsewhere in this *News*. This group will function in the same way as do the Midwest, Ohio, Southeast, and Southwest regional groups.

(4) Courses and Curricula—General. This is the successor to the Committee on Professional Education in Accounting, and is the basic committee devoted to standards of instruction. Its agenda includes all matters not specifically covered by the more specialized Education Committees. (5) Courses and Curricula—Professional Degree Education in Accounting. The work of this committee is aimed mostly at the first year beyond the bachelor's degree. It will study MBA programs, special degrees, and the professional school of ac-

counting. (6) Courses and Curricula—Doctoral Programs in Accounting. The title indicates the nature of this committee. It continues work on this subject started prior to 1960.

(7) Post-Degree Continuing Education in Accounting. The Advisory Committee on Professional Development Programs has been replaced by this committee. The Committee was originally set up to advise the AICPA regarding its professional development programs; it will continue this work and broaden its scope to advise with other organizations and to consider the general matter of continuing education. The chairman of this committee is a member of the Joint Committee on Education and sits in with the Joint Committee on Cooperation with Other Organizations. (8) Study of the Ford and Carnegie Foundation Reports. This committee will devote its attention to these reports as a whole, although some of the other Education Committees may be making a limited study of parts of the reports in connection with their specific assignments. This committee will attempt to evaluate the studies as to the methods used in their preparation and their conclusions and to make general recommendations, growing out of a study of these reports regarding accounting instruction and business. Education, industry, public accounting, and government are represented on this committee. Former chairmen of four AAA committees on standards of instruction are included on the committee to facilitate the study.

(9) Income Taxation. Over the years, this committee has not made the significant contributions which some have expected in this area. One of its first jobs is to study what the role of an AAA income taxation committee should be. It may very well get into a thorough study of the nature of university instruction in income taxation and the appropriate part to be played by university departments of accounting. We hope to have on the committee professors of tax accounting, tax law, and the economics of taxation, a tax accounting practitioner, and a representative of the Internal Revenue Service.

(10) The Joint Committee on Cooperation with Other Organizations is composed of (a) the chairmen of the task committees on the CPA Examination, Accounting Careers, and Post-Degree Continuing Education in Accounting, (b) the chairmen of the Joint Committee on Education and the Joint Committee on Research, and (c) liaison representatives for the areas of faculty residency, student internships, internal auditing, and personnel testing. A representative will become a task committee chairman if it becomes necessary to provide a committee in his area. Each representative is responsible for watching developments and for maintaining relationships with other organizations in his sector.

Appointment of Committee Members

In accordance with the by-laws, and with the advice of the Executive Committee and others, I have appointed the committee chairmen and members. Former presidents warned me that the naming of committees would be a big and difficult job. However, I did not really appreciate what a job it is until well into the process. It is necessary to balance off the conflicting goals of limiting committees to those which actually have a job to do and which will do it with bringing as many members as possible into active participation in committee work. On the one hand, we wish to reward those who have already worked well by placing them in more important positions and to have persons of experience and proven ability and dependability on our committees; on the other hand, we are anxious to give young members and new members a chance to take active part in the affairs of the Association and to develop and maintain its strength for the future.

A few persons have expressed concern that young people and those at small schools find it difficult to get into the committee picture. This is a problem. However, I believe that my predecessors and I are conscious of the matter and have tried to get such representation on our committees. The big difficulty is ascertaining the desires, capabilities, subject matter interest, and dependability of new members or older members who wish to become active. Perhaps, the solution is for each accounting department head to suggest the names of a few persons whom he can recommend strongly and to furnish some description of their capabilities, interests, age, rank, and experience. I have attempted to balance representation between (1) small, medium sized, and large schools, (2) geographical sections of the country, (3) various public accounting firms, and (4) industry, public accounting, and government. Unfortunately, what is fair is a matter of opinion; there are no objective criteria. Further, some of our plans and balances are upset by appointments which are declined, some with good reason, some with small reason.

The rosters of many committees are larger than in past years, some having eight or ten members. Increased participation in committee activities will be gained at the cost of increased expense and, perhaps, some additional difficulty in arriving at committee decisions. However, those disadvantages should be offset by an increase in active interest in the Association, some decrease in the workload of individual committee members and decisions founded on the more representative base which a larger committee affords.

We think we have a good committee structure and an excellent roster of committee members and hope and expect them to be productive.

* * *

The American Accounting Association is yours. We want you to feel that you are an active part of it and that it is responsive to your needs. Help the Association to improve and grow by contributing articles to THE ACCOUNTING REVIEW, attending the annual meeting at Columbus in August, and assisting the Membership Committee to add a substantial number of new members to our roster. Your comments and suggestions will be appreciated.

CHARLES J. GAA

COMMITTEE REPORTS INDICATE ACCOMPLISHMENTS

The chairmen of all standing committees report to the Executive Committee twice yearly, either directly (in person at the August meeting and by mail in December) or, under our joint-committee organization, through the chairman of the joint committee responsible for their activities. Thus the Executive Committee is kept informed of committee activities or, in rare cases, inactivity. Reports presented at the December meeting of the Executive Committee demonstrate that the Association's committees are both hard working and productive. Brief summaries follow.

The ***Membership Committee***, under the chairmanship of Charles H. Martin, Rutgers U., directed its campaign toward a broad coverage of all fields of accounting, including members of professional accounting organizations, teachers, and industrial and governmental accountants. Both selected mailings by various State Chairmen and mass mailings to accounting groups through the office of the Secretary-

Treasurer were utilized. The success of these efforts is indicated by the increase in new members during the year.

New regular members.......1,964
New associate members.....4,728

Distribution of *Young Eyes on Accounting*, the career pamphlet for high school students, on as wide a basis as possible has been the chief concern of the *Committee on Accounting Careers*. By the close of 1959, well over half a million copies had been distributed as follows:

DISTRIBUTION OF "YOUNG EYES ON ACCOUNTING"
Through 1959

AAA members	8,000
Guidance counselors	4,500
Ohio high schools	5,000
Future Business Leaders of America	1,500
Math teachers	17,000
Commercial teachers	17,000
Junior Achivement	50,000
Requests	501,000
Distribution to date	604,000
Distribution in process (requests on hand but not filled)	65,000
Total	669,000

REQUESTS FOR "YOUNG EYES ON ACCOUNTING"
Through 1959

	Number of Requests	*Copies Requested*
High schools	5,227	367,200
Colleges	474	85,200
Professional organizations	97	36,100
Public accounting firms	143	6,400
Industrial organizations	87	2,900
Miscellaneous	505	3,200
Total requests	6,533	501,000

Any AAA members who wish to make copies of *Young Eyes* available to high school counselors or interested groups in their localities should address their requests to R. L. Dickens, Duke U., explaining the nature of the planned distribution so duplications may be avoided. If you haven't seen it or want a supply in your office, write to Bob Dickens.

The *Committee on Concepts and Standards on Income for Taxation*, Horace J. Landry, Syracuse U., Chairman, continued its study of income concepts and standards appropriate for taxation with special reference to conflicts between good accounting theory and treatments in the Internal Revenue Code. All members of the committee prepared papers on this subject. The papers were circulated within the committee and reviewed prior to a meeting held in conjunction with the Annual Meeting at Boulder. Here the various papers were discussed at length and plans were made for a summarizing statement to be prepared by the chairman and submitted to the committee members for their comments after which final revision would be attempted. It is planned to complete this project early in 1960.

The *Committee on Research Review* under Jim Schindler's (Washington U.) leadership reviewed all available abstracts of doctoral dissertations in accounting completed during 1957 and 1958. These have been or will be published in THE ACCOUNTING REVIEW as was the annual list of theses and other research in progress. The committee selected authors of six recently completed dissertations to present résumés of their studies at one of the round table sessions at the Annual Meeting in August. A number of manuscripts have been reviewed by the Committee as possible publications including reprints of "classics" in accounting, books of readings, and monographs. In this connection the committee pointed out the need for a review of the Association's publication procedures and suggested the desirability of establishing a policy concerning various types of publications, criteria for evaluating manuscripts under each classification, and procedures for the orderly and prompt processing of submitted manuscripts.

Members of the *Committee on Accounting Theory* have worked together over the last two years on various aspects of theory which they felt gave promise of a

real contribution. The papers have been circulated and discussed within the committee. Three have been completed and will appear in future issues of THE ACCOUNTING REVIEW, one is still in progress, and one was submitted to another publication. Maurice Moonitz, U. of California, Berkeley, served as chairman during both years.

Lee Brummet, U. of Michigan, chairman of the *Committee on Management Accounting*, made research assignments to various committee members last spring. The results of their efforts plus committee discussion were then brought together in a statement which has been approved by the Executive Committee for publication in THE ACCOUNTING REVIEW.

The *Joint Committee on Research*, composed of Rufus Wixon, U. of Pennsylvania, chairman, and the chairmen of the task committees on education met in Chicago in February to plan activities for the year. Each task committee then carried on its assignment by correspondence and through discussions.

Under the chairmanship of R. I. Dickey, U. of Illinois, the *Committee on Professional Education in Accounting* explored a number of items of interest but found the time available inadequate for solution of any of the questions at issue. Among the matters discussed were liaison with other accounting organizations on educational matters, four-year versus five-year college programs, the Gordon and Pierson reports, integration of courses in business, mathematics in the accounting curriculum, and accreditation.

The *Personnel Testing Advisory Committee* with Merrill Dilley, Drake U., as chairman reviewed a revision of the AICPA Accounting Achievement Test, Level II and made suggestions which were forwarded to the AICPA and incorporated in the final version of the revised Level II test.

Paul Fertig's (Ohio State U.) *Advisory Committee on Professional Development* undertook a thorough study of methods of professional development resulting in a comprehensive report which the Executive Committee has approved for publication in THE ACCOUNTING REVIEW

The *Committee on Student Internships* centered its activities for the year on the development of recommendations to the Executive Committee concerning the attitude which the AAA should adopt toward industrial internships for accounting students. In essence the recommendations proposed a program of active experimentation leading to solicitation of the cooperation of other organizations to provide more industrial internship opportunities. Joe Lane, U. of Alabama, was chairman.

The *Committee on Faculty Residency* tries to stimulate interest in and make possible practical accounting experience for educators. During the year the chairmen of accounting departments of all schools holding membership in the American Association of Collegiate Schools of Business were contacted by mail twice. The following comparative summary by W. Asquith Howe, Temple U., chairman, indicates the nature and extent of participation in the Faculty Residency Program for the years 1958 and 1959:

	1958	*1959*
Total participants	49	24
Schools participating	33	11
Length of time:		
Less than six months	44	20
Six months or more	5	4
Type of experience:		
C.P.A. firms	9	17
Commercial firms	8	3
Other (governmental, institutional work, C.P.A. grading staff, etc.)	32	4

Another committee report approved for publication in THE ACCOUNTING REVIEW is that of the *Committee on Scope of the Four-Year Accounting Major*. This committee was appointed by President Black to study the future of the four-year major in accountancy. Walter Kell, Syracuse U., was chairman. The length and quality of its report reflect the amount of effort ex-

pended by the members of this committee in completing their assignment within a remarkably short time.

During the first half of the year, the *Committee on Teaching Methods* designed and sent to about one hundred members of the Association a questionnaire on the teaching methods used in the member's favorite course. The questionnaire was designed to elicit a page or two of description. Thirty-four replies were received. These were circulated among the members of the committee as a basis for discussing objectives of accounting courses and the general methods involved. Chairman was John H. Myers, Northwestern.

Leon E. Hay, Indiana U., has served as a one-man *Committee on Internal Auditing* during 1959. His principal function has been to serve as a liaison representative of the Association in matters of interest to the Institute of Internal Auditors, particularly with respect to the recruitment of high school students for accounting and other matters of an educational nature.

The *Committee on the CPA Examination* addressed itself to the following policy questions:

1. Should it attempt to update and republish the AAA booklet, *CPA Examination Requirements?*

2. What should be the treatment of income tax material on the CPA Examination?

3. Should it encourage the AICPA to publish a syllabus for CPA preparation that would be a more specific guide than those now available?

It was concluded that revision of the CPA Examination Requirements should not be attempted. No consensus was reached as to the amount of income tax coverage on the CPA Examination but chairman Larry Vance, U. of California, Berkeley, forwarded the suggestions of the members to the appropriate AICPA officials on an informal basis. It was concluded that preparation of a syllabus for CPA preparation by the AAA was not advisable but that the chairmen and others should cooperate fully with the AICPA in any efforts of this nature if requested.

EXECUTIVE COMMITTEE ACTIONS

The combined 1959 and 1960 Executive Committees met December 4 and 5 to review with President Black the activities of Association officers and committees for 1959 and to plan with President Gaa for 1960. Among the actions taken during this meeting, the following appear of special interest to Association members:

Approved establishment of a Northeastern Regional group of the Association, effective for 1960.

Approved appointment of an *ad hoc* committee to draw up a policy statement with respect to the establishment and control of regional groups, both domestic and foreign. The committee appointed by President Gaa at a later date includes Carson Cox (Ohio State), Glen Welsch (U. of Texas), and Bob Mautz (U. of Illinois), chairman.

Approved delegation of authority to prepare, approve, and print a new promotional folder to a committee composed of President Gaa, Carson Cox, Bob Anthony, Harvard, and Bob Mautz.

Approved a policy of making the imme-

diate Past-President of the Association automatically chairman of the Fellowship Committee, the responsibilities of this office to be assumed April 1 of each year. The Fellowship Committee always includes the three most recent past presidents of the Association.

Approved publication on an experimental basis of a newsletter for members to be issued twice a year. A total of $1,000 (net of any advertising revenue) was authorized for the first year. (Because of difficulties involved in manufacture and mailing a second publication, the Executive Committee later agreed to expand the Association Notes department of THE ACCOUNTING REVIEW, still on an experimental basis, rather than undertake a separate publication at this time.)

Approved appointment of Dean Santiago F. de la Cruz, U. of the East, as official representative of the Association at the National Annual Meeting of the Philippine Institute of Accountants.

Approved appointment of Dean S. Paul Garner, U. of Alabama, as official representative (at no cost to the Association) of the Association at the Asian and Pacific Accounting Convention to be held in Melbourne, Australia.

Instructed the Secretary-Treasurer to write a letter to Professor Charles H. Martin, Rutgers U., Chairman of the Membership Committee for 1958 and 1959, complimenting him on his outstanding performance in that position.

Approved the Report of the Committee on Management Accounting for publication in THE ACCOUNTING REVIEW.

Adopted a policy of not financing the publication of books of readings with Association funds.

Approved the Report of the Advisory Committee on Professional Development for publication in THE ACCOUNTING REVIEW.

Approved the Report of the Committee on the Scope of the Four Year Accounting Major for Publication in THE ACCOUNTING REVIEW.

Considered the desirability of publishing a five-year index of THE ACCOUNTING REVIEW and approved a motion not to publish.

Approved dropping the Alpha Kappa Psi award for 1960 and subsequent years and authorized the President to extend opportunities to contribute to the American Accounting Association Fellowship Program to Alpha Kappa Psi, Delta Sigma Pi, and Beta Alpha Psi.

Approved the committee structure for 1960 (see committee appointments, pp. 374–375).

Approved a budget calling for estimated operating expenditures and receipts slightly in excess of $91,000.

Acknowledged with an expression of gratitude the completion of seven years of service on the Executive Committee by Past President John A. White, U. of Texas.

Expressed appreciation to President Black for his outstanding service to the Association during 1959.

ASSOCIATION NOTES

Homer A. Black, Florida State U., has been elected Secretary of the Tallahassee Chapter of the Florida ICPA. He is also conducting a research project for the AICPA on "Accounting for Income Taxes." . . . Peter M. Black has been appointed to the staff of the Babson Institute of Business Administration. . . . Fred O. Bogart, U. of Arizona, is serving as President of the Southern Chapter of the Ari-

zona SCPA. . . . Orton W. Boyd, formerly with the Atomic Energy Commission, has joined the staff of the American U. as an Associate Professor of Taxation and Accounting. . . . Emsar Bradford, Jr., Long Island U., has been promoted to Adjunct Assistant Professor in Accounting. . . . Horace Brock, who spent last year as a visiting professor at Ohio State, has been promoted to Professor at North Texas State College. . . .

Joseph Cassidy has been added to the staff of Long Island U. as an Instructor in Internal Auditing. . . . John E. Champion, Florida State U., recently completed all requirements for the Ph.D. degree at the U. of Michigan. . . . Ben Copeland has joined the staff of North Texas State College as an Instructor. . . . Eric Daenecke, on leave from Strayer College, has accepted reassignment as Commercial-Industrial Accounting Adviser to the Government of Iran for a two-year term. . . . Joseph H. Dworetsky is serving as chairman of the Department of Accounting, Long Island U. . . . Orville Elliott, North Texas State College, has been promoted to Associate Professor; he received his CPA certificate as a result of the May examination. . . .

Paul E. Fertig was appointed Chairman of the Department of Accounting Ohio State, effective July 1, 1959. . . . W. Ross Heck, formerly of Louisiana State U., has joined the faculty of Florida State U. . . . Porter Henderson has joined the staff of North Texas State College as an Associate Professor. . . . Russell M. Howard, Head of the Department of Accounting, U. of Arizona, is on leave to study retirement systems for educational institutions. . . . Harold W. Jasper has returned to Miami U., Ohio, as Assistant Professor of Accounting after spending three years at the U. of Illinois working toward a doctorate. During his absence from Miami, he also spent some time in public accounting and passed the CPA examination. . . . David Jenkins, formerly with the Los Angeles office of Arthur Young & Company, has joined the accounting department, Los Angeles State College, as an Assistant Professor. . . . Willard P. Keebler is serving as a Lecturer in Accounting at Miami U., Ohio, for the current academic year. . . .

Patrick S. Kemp, Emory U., served as a discussion leader in the short course "Accountants' Fees" developed by the AICPA and presented by the Macon Chapter of the Georgia SCPA at Macon, Georgia, in December. . . . Paul LaGrone, U. of Arkansas, will be on leave during 1960–61 for a year's residency with Arthur Andersen & Company. . . . Elzy V. McCullough joined the staff of Ohio State as an Associate Professor October 1. . . . Gibbes V. Miller, Florida State U., is on leave of absence working toward a Ph.D. degree at the U. of Michigan under an Earhart Foundation Fellowship. . . . Louis A. Myers is serving as Acting Head of the Accounting Department, U. of Arizona, while Russell M. Howard is on leave. . . . William A. Newman, Jr., has been appointed director of the Defense Accounting and Auditing Division of the General Accounting Office. He succeeds Lawrence J. Powers who was recently designated Assistant to the Comptroller General. . . . C. Rollin Niswonger, Miami U., Ohio, is on leave of absence and is teaching at Arizona State, Tempe. . . .

W. A. Paton and Sidney Davidson, U. of Chicago, participated in the discussion before the Ways and Means Committee of the House of Representatives on the depreciation provisions of the Internal Revenue Code. . . . Louella Richey, for 16 years the only Florida Woman CPA, will retire this year after serving on the faculty of Florida State U. for 43 years. . . . Theodore R. Saldin, State College of Washington, will be on sabbatical leave the

spring semester to do research on the teaching of tax accounting. . . . Milton Simon has been appointed a Lecturer in Accounting in the C. W. Post College of Long Island U. . . . John W. Stevenson joined the accounting staff of Texas Christian U. in September. . . . Arch M. Stockard has resigned from the staff of Miami U., Ohio, to accept an appointment in the Office of Special Studies, National Science Foundation. . . .

Philip Tibbs, after completing work for the Master of Accounting science degree at the U. of Illinois, has joined the staff of Miami U., Ohio, as an Instructor. . . . Melvin Voth has joined the staff of Kansas State U. as an Instructor in Accounting. . . . Archibald Wagner, retired partner of Haskins & Sells, is a part-time lecturer this year at the U. of Arizona, teaching a senior-graduate course entitled "The Ethics and Responsibilities of the Accountant." . . . Glen G. Yankee is serving as Acting Chairman of the Department of Accounting, Miami U., Ohio, during C. Rollin Niswonger's leave of absence. . . .

The 15th Annual Tax Institute of the American U. was held in December. . . . At the opening of school in September, the School of Business Administration, Miami U., Ohio, moved into its new building, Samuel Spahr Laws Hall. . . . Epsilon Chapter of Beta Alpha Psi, originally organized at Oregon State College in 1921, was reactivated during the spring semester. The reactivated chapter sponsored a tax conference on the campus for accountants, attorneys, and businessmen. . . . "Accounting Management in Public Administration" was the theme of the Second Annual Accounting and Management Conference at Pan-American College in April. . . . C. W. Post College has established a limited internship program for advanced students who have "B" averages or better. Eight public accounting firms in the New York area are co-operating. . . . A new degree, Master of Accounting, is now being offered by the U. of Arizona. The Department of Accounting, in co-operation with the Arizona SCPA is sponsoring two short conferences entitled "The Independent Accountant's Opinion" and "Tax Planning and Tax Controversies." Fred O. Bogart and William Raby are planning these programs.

Included in the Quantitative Methods section of the Denver Seminar in New Developments in Business Administration last year were Thomas M. Dickerson, Western Reserve U.; Clarence L. Dunn, Louisiana State U.; Charles T. Horngren, U. of Chicago; Lyle E. Jacobsen, Stanford; Harold Q. Langenderfer, U. of North Carolina; Edward S. Lynn, U. of Wisconsin; Wayne S. Overmyer, U. of Cincinnati; Harry R. Price, U. of Miami, Florida; Frank Singer, U. of Massachusetts; Stephen W. Vasquez, Saint Louis U.; Vern H. Vincent, West Virginia U.; S. M. Wedeberg, U. of Maryland; Nolan E. Williams, U. of Texas. . . . The following were among those attending the Harvard Summer Case Seminar Program last summer: Frederic A. Brett, U. of Alabama; Henry Key, Texas Christian; Gordon J. Miller, U. of Utah; Carl L. Moore, Lehigh; G. Kenneth Nelson, Pennsylvania State U. . . . A special class in the IBM Customer Executive Program was held for Professors of Business Administration last August. Among those attending were Rudolph W. Bergner, U. of Detroit; Mrs. Luta P. Eaves, Texas Tech.; John S. Ellett, Washington & Lee; Charles P. Foote, Texas Christian; Werner G. Frank, Bowling Green; James D. J. Holmes, U. of Mississippi; Vincent H. Jones, Southern U.; Herman F. Loebl, Marquette; George F. Malecek, St. Mary's; Charles F. Nagy, Ohio State; John M. Reed, Southern Methodist; Eugene T. Schauer, Oklahoma State; Paul E. Schwartz, Ashland College.

COMMITTEE CHAIRMEN MEET

Members of the Joint Committees on Education, Research, and Cooperation and the chairman of the Income Taxation Committee met in Oak Park, Illinois, January 23 to discuss plans for 1960. Each committee met separately and all three also met together to exchange views and outline their work. In addition, those present were given a summary of AAA activities planned for the year and an opportunity to make suggestions.

President Gaa outlined general plans for the organization; Carson Cox described 1960 convention arrangements; Walter Kell presented the tentative technical program for the convention; Bob Mautz discussed plans for the *News* and the *Review*; and Bob Dickens discussed the career pamphlet "Young Eyes on Accounting."

CO-OPERATION WITH OTHER ORGANIZATIONS

On January 14, President Gaa and Secretary Cox visited the AICPA offices and discussed research with Carman Blough and Perry Mason and the CPA examination with Wilton Anderson.

On the following day the presidents and managing directors or secretaries of the AAA, the AICPA, the Controllers Institute, and the NAA met to discuss co-operation among their organizations. The subjects covered included research, education, recruitment of high school students for accounting careers, a national organization of accounting students, the AAA Accounting Fellowship Fund, and support of business schools by the business community. As an interesting sidelight, it was agreed to discontinue the practice of inviting official representatives of the other organizations to attend and be introduced at annual meetings of each association. It was felt that this practice is somewhat meaningless and sometimes burdensome to those who must travel and spend time away from their work to appear.

Additional co-operation meetings are planned among these organizations for (a) presidents and managing directors or secretaries, (b) research directors, (c) managing directors (on operating problems), and (d) representatives handling the problem of recruiting high school students for accounting.

All those in attendance felt that the meeting was very much worthwhile and should be continued. Further, it was decided that the Institute of Internal Auditors should be added to the group. The host for the meeting was the Controllers Institute; the AAA will act as host for the next meeting.

ASSOCIATION GROWTH

The growth of your Association is at least partially indicated in the annual (full) membership statistics for the last decade.

1950	3,744	1955	5,346
1951	3,847	1956	7,044
1952	4,148	1957	8,094
1953	4,327	1958	8,302
1954	4,542	1959	9,563

1960 CONVENTION

The Annual Meeting of the AAA will be held August 29, 30, and 31 on the campus of The Ohio State University in Columbus Ohio.

Tentative arrangements call for registration and an afternoon picnic on Monday, August 29. Members will be kept busy on Tuesday and Wednesday with technical sessions, round tables, and a business meeting at noon on Wednesday. The annual banquet will be held Wednesday evening, at which the president for 1961 and the president-elect for 1962 will be introduced.

Members are invited to bring their families and special programs are planned for the ladies, teen-agers, and children.

Space in student dormitories will be available for those who prefer convenient accommodations. Columbus also has extensive hotel and motel facilities. Parking will be provided on the campus.

More detailed plans will be distributed to members as soon as available. From all indications the 1960 convention will be one of the best. Plan to attend.

AAA REGIONAL MEETINGS GAIN INTEREST

With the approval by the Executive Committee of a Northeastern Group, the Association now has five active groups or sections operating within the general Association framework. These groups typically hold one meeting a year at which technical papers are presented on a more-or-less formal basis followed by group discussion. The meetings provide an opportunity for exchange of ideas, development of professional contacts, preparation and presentation of papers, and renewal of old friendships. It is not the purpose of group meetings to supplant the annual meeting of the Association, but for many who, for one reason or another, cannot attend the annual meeting they provide opportunities for professional developments closer home. For many who do attend the annual meeting, the group meeting is an additional and highly valued activity.

The Southwestern Group met at Galveston, Texas, March 27 and 28 as a Section of the Southwestern Social Science Association. Its technical program included three sessions: Friday morning with Paul LaGrone, U. of Arkansas as chairman, Fred Norwood, Texas Tech presented a paper "Management Services by Certified Public Accountants" with a discussion by Walter Manning, Texas A & M, and Othel D. Westfall, U. of Oklahoma, talked on "Linear Programming and the Accountant" with discussion by J. W. Parsons, Baylor U. Friday afternoon had Fran Jabara serving as chairman and a paper entitled "Social Responsibility of the Certified Public Accountant" by Roger L. Holmes, Baylor U. which was then discussed by Paul Lindloff U. of Houston. Jim G. Ashburne, U. of Texas spoke on "Cooperation with the Accounting Profession" and discussion by I. E. McNeill, U. of Houston, followed. Tom Rose, North Texas State College, was chairman for the Saturday morning session which included a paper "A Dean's Look at the Accounting Department," by Dean O. J. Curry, North Texas State College and a paper by Walter Plumhoff, Arthur Andersen & Co., on "The Practitioner Looks at the College Accounting Program." William P. Carr, Loyola University, will serve as chairman of the Group for 1960. He plans to include the following papers in a three-session meeting similar to the 1960 convention: "The Function of the C.P.A. Examination Appraisal Commission—the Pre-CPA Phase of Education," Robert Meier, Loyola U., of Chicago; "The Function of the C.P.A. Examination Appraisal Commission—the Post-CPA Phase of Education," Robert E. Groth, Partner, Williams, Hurst & Groth, Tulsa; "The Status of the Accounting Profession in the South," Paul W. Burnam, Southwestern Louisiana Institute; "Education for Professional Accounting," Louis H. Jordan, Tulane; "Preparation and Use of Visual Aids in Business Education," Wayne P. Tenney, U. of Texas; "The Need for a Re-Appraisal of the Balance Sheet," J. Herman

Brasseaux, Louisana State U.; "A Simple Technique for Solving Cash-Flow Problems," Howard M. Daniels, U. of Houston; "Modern Sampling Methods as Applied to Auditing," Dan D. Davis, Southern Methodist. President Gaa is also scheduled to speak.

The Southeastern Group met at Tallahassee, Florida, March 6 and 7, 1959. The technical program included both papers and round table discussions. Friday morning, with Warren Slagle, U. of Tennessee as chairman, three papers were presented: "What the Practicing CPA Desires in the Accounting Graduate," Tom Hudson, Haskins & Sells, Atlanta; "The Five-Year Program in Accounting," Peter A. Firmin, Tulane; "Social Foundations for Accounting Theory," Gibbes V. Miller, Florida State U. Round tables occupied the afternoon session as follows: "The Place of the Basic Concepts of Electronic Data Processing in Elementary Accounting," William A. Terrill, U. of North Carolina; William S. Gay, Virginia Polytechnic Institute; Carl A. Anderson, U. of Florida. "Review of Progress of TV Instruction," Joe Lane, U. of Alabama; H. M. Heckman, U. of Georgia; Conley R. Addington, U. of Miami; "The Third Accounting Course for Non-Majors," Clarence Dunn, Louisiana State U.; Jim Lanham, U. of Florida; F. A. McCameron, Georgia State College of Business Administration. "The Elementary Course: Objectives, Approach, Content," William Tuthill, U. of South Carolina; Robert L. Dickens, Duke; Joseph Cerny, U. of Mississippi. "Content of the Auditing Course," James H. McLean, U. of Tennessee; Marvin Tummins, U. of Virginia; A. W. Swang, David Lipscomb College.

The Saturday morning session, under the chairmanship of Robert Van Voorhis, Louisiana State U., included "The Accounting Period and Income Determination," by James T. Johnson, Louisiana Polytechnic Institute; "Industrial Internships for Faculty," W. C. Flewellen, U. of Alabama; "A Critique Relating to Certain Accounting Procedures and Conventions," Harry Wade, U. of Miami, Florida.

In addition to the technical program, a resolution was adopted at the business session on Saturday morning expressing sympathy and a dedication of remembrance for the passing of Lyle E. Campbell, Emory U., a charter member of the Southeastern Group. The U. of Tennessee was selected as host for the 1960 meeting which will be held Friday and Saturday, April 29 and 30. A ladies program, conducted concurrently with the technical session, included a tour of the new Governor's Mansion and Killearn Gardens.

Weyman Patrick, University of Tennessee, as 1960 chairman, plans a program including the following papers: "The C.P.A. Examination," Wilton T. Anderson, AICPA; "Professional Education for Public Accounting," John B. Ross, U. of Tennessee; "An Evaluation of the Factors Influencing a Choice of Depreciation Methods," Isaac N. Reynolds, U. of North Carolina, and round table discussions on "The Curriculum and Requirements for a Master's Degree," "The Use of Teaching Aids," "The Mathematics Course for Business," "Law and the Accountant," "The Controller as Both an Accountant and Finance Officer," and "Teaching and Practicing—Advantages, Disadvantages, and the Problem of Dual Responsibility." Charles Gaa, President of the AAA, will speak at the Friday luncheon.

Dennis Gordon, 1959 chairman of the Ohio Group, reports that a panel discussion on "How the New Accountancy Law Will Affect Ohio Colleges" featured the third annual meeting of the Ohio Regional held at The Ohio State University in Columbus on December 5, 1959. More than ninety teachers attended from twenty-seven schools.

John Ziegler, Fenn College, presided at the morning session which included an

explanation of the new Ohio law by the entire State Board of Accountancy consisting of Clifford E. Leitner, Roger F. Knittel, Stanley A. Hittner, Rudolf Bauhof, Lester W. Buenzow, and the executive secretary, Dan Joseph.

George Selzer, Xavier University, led a discussion on "Trends in the Undergraduate Accounting Curriculum" which was particularly directed toward the effect the new law would have on Ohio curricula.

The afternoon session was devoted to concurrent panel discussions: "Content and Objectives of the Introductory Accounting Course," Paul Schwartz, Ashland College and Irving K. Christiansen, John Carroll; "Current Trends in the Teaching of Taxation," Robert Katzenmeyer, U. of Akron and William Conway, Kent State U.; "The Need for Teaching Management Accounting," Ralph Beckert, Ohio U. and William Schmeltz, Bowling Green State U.; "The Place of the University in the AICPA Professional Development Program," Glen Yankee, Miami U and Paul Fertig, Ohio State.

Dean James R. McCoy, Ohio State University, spoke during the luncheon session. Ralph Beckert of Ohio U., Athens, was elected chairman of the 1960 program, which will be held in Columbus on December 3, 1960.

Formation of a Midwestern Group of the AAA was approved by the Executive Committee at its August, 1959 meeting in Boulder. For several years this group has met as an accounting section of the annual meeting of the Midwest Economics Association but not until the 1959 meeting did its members vote to request recognition from the AAA.

The 1959 program was arranged by Don Edwards, Michigan State U., and included a Friday afternoon session April 17 and a Saturday morning breakfast followed by a combined business and technical session. The afternoon session with Robert E. Schlosser, U. of Illinois, as chairman, had included two papers, "Selection of Worth-while Operations Research Projects," by Roger G. Crane, Touche, Niven, Bailey & Smart, and "Educators, Electrons, and Business Models: A Problem in Synthesis," Gardner M. Jones, Michigan State U. Don Edwards served as chairman for the Saturday morning session at which Sidney Davidson, U. of Chicago, presented a paper entitled "New Directions in Accounting Theory." Leon Hay, Indiana U., was elected chairman for 1960.

The 1960 meeting will be held in conjunction with the Midwest Economics Association meetings in Minneapolis April 29 and 30. The program will include "Depreciation Reform—What Does Business Want?" Ray Powell, Notre Dame; "Responsibilities in Accounting Research," Raymond C. Dein, U. of Nebraska; "The Structure of Cost Control," William Ferrara, U. of Illinois, and a discussion of the subject "Are College Accounting Curricula Unfairly Dominated by CPA Examination Requirements?"by Richard S. Claire, Arthur Andersen & Co., Gilbert P. Maynard, U. of Iowa, and George J. Wachholz, Minnesota Mining and Manufacturing Co.

What is now the Northeast Regional Group of the American Accounting Association held its first regular annual meeting at Hofstra College in Hempstead, New York, on Friday and Saturday, November 13 and 14, 1959. Ninety-five persons attended from education, with 50 schools represented. Twenty-nine came from 15 public accounting and industrial firms. The total registration was 124 persons from 64 schools and companies.

The theme of the meeting was *Modern Accounting for Modern Business*. The pattern followed was to have a general session at the beginning of each half day with a speaker setting the topical position for the four concurrent conferences which followed. The Friday afternoon meeting was

given to the practice of accounting, while the two sessions on Saturday were devoted to accounting education. Speakers for the general sessions were Carman G. Blough, AICPA, "Recent Developments in Accounting Thought and Practice"; Rufus Wixon, U. of Pennsylvania, "A Critique of the Accounting Curriculum for Public and Private Practice"; and Arnold W. Johnson, New York U., "The Revision and Integration of the Accounting Curriculum."

Concurrent conference subjects and leaders for the first session were: "Direct Costing—Advantages and Disadvantages," Harold H. Fogg, Hofstra College and J. W. Neuner, The City College of New York; "The Role of the Accountant with Respect to Quantitative Data," Andrew C. Cummings, Pace College and Charles W. Bastable, Columbia U.; "The Return-On-Capital Basis for the Evaluation of Management," Charles L. Savage, St. Francis College and William J. Jacquette, Ernst & Ernst; "Expanded Functions of the Public Accountant," Leonard L. Start, Hofstra College and John J. Irvine, Arthur Young & Company.

The second session included "The Effective Teachings of Auditing," Lincoln Orens, Reiner and Orens and William J. Von Minden, Rutgers U.; "Methods of Integrating Accounting Theory with Practice—Internship Programs, Field Trips, Speakers, etc.," Nicholas C. Vogel, Hofstra College and David W. Thompson, Peat, Marwick, Mitchell & Co.; "Content and Objectives of the First-Year Course in Accounting," Ralph G. Ledley, Queens College and Fred L. Sullivan, Suffolk U.; "Educational Preparation and In-Company Training for Controllership," David R. Dilley, United States Steel and John W. Gladson, Esso Standard Oil Company.

Conference subjects for the third session were "The Place of Electronic Data Processing in the Accounting Curriculum," Donald F. Timmons, John Kraus, Inc. and Charles G. Abbott, Arthur Andersen & Co; "Disputed Subject Matter Areas and Their Treatment in the Teaching of Accounting," Leo Schloss, Long Island U. and Saul Feldman, Hofstra College; "The Place and Content of Management Accounting in the Business Curriculum," Helen E. Bergen, Hofstra College and Frank A. Singer, U. of Massachusetts; "New Approaches and Methods in the Teaching of Accounting," Paul Sage, Adelphi College and Charles Goulston, Bryant College.

President Martin Black, Jr. spoke at the banquet meeting on Friday evening. William H. Childs, Hofstra College, served as chairman of the 1959 committee.

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Notice of

ANNUAL MEETING

The Annual Meeting of
The American Accounting Association

The Ohio State University
Columbus, Ohio

August 29, 30, and 31

Details of the technical and social programs will appear in the July issue of *The Accounting Review.*

Plan Now To Attend

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JAMES S. LANHAM, *Editor*

Accounting

Economics

General

Accounting

Richard J. Bannon and Edwin Cohen, ***Preparation of Statement of Sources and Application of Funds by the T-Account Method*** (Cincinnati: South-Western Publishing Company, 1959, pp. 30).

This booklet presents the T-Account method of analyzing the data for the preparation of the "Statement of Sources and Application of Funds." It provides the student with a simple step-by-step explanation of the T-Account method.

In recent years the "Statement of Application of Funds" has appeared with increasing frequency in the audit reports of both public and internal accountants and is currently recognized as a valuable part of financial reporting. The authors believe that the T-Account method is more readily and more thoroughly understood by students.

J.S.L.

Walter W. Bigg and J. O. Davies, ***Internal Auditing***, Second Edition (London, England: H. F. L. Publishers Ltd., 1959, pp. ix, 187, Price 21 shillings).

This 1959 revised edition of ***Internal Auditing*** views the work of the internal auditor as an activity rooted in accounting but reaching out toward management. Its growth in Great Britain is attributed to the formation during the last thirty years of large business combines and the trend toward public ownership of a number of industries. Internal auditing is described as a control device; the larger the business and the farther removed the proprietor from managerial details the greater the significance of this instrument of control.

The authors indicate that the rapid growth of internal auditing in England has not been accompanied by the appearance of much writing on the subject. Internal auditors in England have relied to a considerable extent on literature published in the United States. This book, however, is based on British concepts.

Considerable emphasis is placed upon the similarity of internal auditing to that of the independent professional or (external) auditor. It is urged that the internal auditor conduct himself in a manner to command the same respect and treatment accorded external auditors. The various sections of the organization selected for audit are to be regarded as clients rather than part of the same organization employing the auditor.

At times an American reader receives the impression that the chief justification for the existence of the internal auditor is to reduce the extent of the work to be performed by the external auditor. Mention is made of the "intolerable strain" which would be placed upon the outside professional auditors if they were to perform a continuous audit of a giant company, and of the attendant loss of variety and insight which comes from brief audits of many businesses.

It is surprising to find space devoted to such minute procedural matters as the color of ink to be used by internal auditors in placing check marks in the records, and to recommendations that management prohibit staff accountants from using the color reserved for the internal auditor. This emphasis upon the importance of detailed verification of records is heightened by the suggestion that a machine operator be attached to each team of internal auditors.

Apparently internal auditors in England restrict themselves more to verification of accounting data than do their American counterparts. Consider the following statement, for example.

> "An internal audit is always continuous and once the audit of the annual accounts has been disposed of, must of necessity be concentrated on the accounting procedures and practices from which the next set of accounts will be produced. . . . "

Certainly in a number of prominent American corporations, the internal audit program places no such emphasis upon continuous detailed verification of the accounts. To do so would seem to rule out use of the internal auditing staff for much investigation and critical evaluation of non-financial matters or of the levels of performance being attained by various units of the organization.

In many other respects, however, British concepts of internal auditing seem to parallel those prevailing in the United States. The importance of a sharp distinction between internal auditing and the performance of accounting routines (such as bank reconciliations) is stressed; to permit the auditor to perform accounting functions means the loss of the detached critical role essential to the auditing function. The internal auditor's work on accounting records comes *after* completion of the accounting process.

After several chapters devoted to such strictly accounting matters as the audit of cash transactions, of the "impersonal ledger," of payrolls, and of fixed assets, the final chapter, ***Internal Auditing As An Aid To Management***, comes as somewhat of a surprise. In this section of the book, consideration is given to the possibility that the internal auditor may move out of the financial field and venture into the operating fields in his efforts to bridge the gap between top management and front-line operation. At this point the authors seem much closer to the current thinking of many internal auditors in this country.

The language used throughout the book is precise and clear without being stilted. The pleasing literary style and the obvious competence of the authors make the book a real pleasure to read even though one may not agree at all times with the choice of objectives and procedures for the internal auditor.

Walter B. Meigs
Head—Department of Accounting
University of Southern California

Thomas M. Hill and Myron J. Gordon, ***Accounting: A Management Approach*** (Homewood, Illinois: Richard D. Irwin, Inc., 1959, Revised Edition, pp. xiii, 543, Price: $7.00).

This volume is the lineal descendant of the text by the same name authored by Robnett, Hill and Beckett which was first published in 1951. This new edition bears both a strong external resemblance to its progeni-

tor and a strength of character which makes it stand out from among its contemporaries. The family resemblance is not so strong as to obscure the changing times and their impact upon management accounting. We find that this youngster has emerged into the world well-equipped with most of the magic words of business education today—decision making, opportunity costs, data processing, decentralization, and statistical techniques. If in some instances these appear to be still just words in this text, it must be pointed out that in most of the other contemporary texts "managerial accounting" is just an empty phrase.

The authors have produced an outstanding introduction to accounting book for use in a one-semester, upper division or graduate course in an engineering school where classes are small and taught by experienced teachers. It will be a good book for use in other courses but it has limitations which prevent it from being ideal for most courses. The authors state in the preface that the book "in its entirety is perhaps best suited to a course of two quarters' duration." This appears to be an accurate assessment although it is easily adapted to a one semester course and can be completely covered in a semester with mature students. There is no reason why lower division students should not be able to use this book if the instructor is willing and able to spend substantial time in explaining points which are not covered in detail in the text. This is not possible in the typical beginning accounting course where large classes, multiple sections, and inexperienced teachers make a self-teaching text more desirable, admittedly to the detriment of the quality of the course. The book is better suited to engineers than business or liberal arts students because of its almost exclusive attention to manufacturing enterprises. In this respect it does not differ substantially from the typical accounting text and it would be possible to supplement it with cases and material drawn from distributive and service organizations.

The organization of the revised edition differs substantially from the original. The major change involves the addition of Part III which consists of six chapters (175 pp.) on cost accounting and budgeting. This material should make the book of much greater value for one-semester or two-quarter terminal courses or for specialized management training programs. The new volume has forty-nine fewer pages of text material so this was not a net addition. Many topics concerning financial accounting receive less attention although the net loss is not equal to the reduction in pages. Treatment of long cases in the text are reduced and more substantive material introduced. The net result is that there does not appear to be any significant loss in content but only a reduction in detail and illustrations.

Part I (5 chapters, 136 pp.) is devoted to an introduction to the methodology of accounting and takes the student through the accounting cycle including a chapter on manufacturing accounts. This section replaces most of Parts I and II in the old edition and it has undergone less change than the rest of the book. Reduced space is devoted to this material through the elimination of issues which were not vital to the development of an understanding of the basic structure of accounting. This should make it possible for a student to get a good overall view of accounting procedure early in the course and thus make more meaningful later discussion of theory and application.

Part II (six chapters, 166 pages) provides an intensive treatment of selected topics in financial accounting with special emphasis upon theory and the impact of certain institutions, especially the Internal Revenue Service, upon accounting procedures. The titles of these chapters—The Realization of Revenue and Expense, Acquisition Cost: Asset versus Expense, Asset Amortization, Current versus Historical Cost, Equities, and Corporate Financial Statements—show the nature of the topics covered. This section would provide the non-accounting student with a carefully stated, concise presentation of the major current problems in financial accounting. It is not intended to be a comprehensive treatment of financial accounting. Recognition has been given in this section to the work of the American Accounting Association Committee on Concepts and Standards and its publications are utilized as references and documentation.

Every book has its deficiencies of detail, for particular uses or in the eyes of others. This reviewer would like to have seen more space devoted to some of the newest developments, including statistical methods and mathematical models, and more attention given to some of the organizational aspects of cost control and planning. Each reader will find other deficiencies of content from his viewpoint. There are relatively few mistakes to bother the student and teacher. The major problem will arise through the tendency of the authors to introduce terms which they do not explain and in some cases never show a reason for introducing. The most glaring case of this is found in the title to Chapter 16, "Opportunity Costs: Data for Decision Making." The reader will search in vain in the chapter for any mention of opportunity costs. The more ambitious student who refers to the index to find another reference will be equally disappointed. It is a nice sounding title but the desire of the authors to introduce one more of the current "in" words has left the reader "out."

This book, despite its minor faults, represents an unusually good addition to the increasing literature on management accounting. Lucky is the teacher who has the type of student and other conditions which make it possible to use this text. Doubly lucky is the student who takes such a class and finds an instructor capable of giving meaning to the material of the book and answering the inevitable questions which will arise in the student's mind, such as "What are opportunity costs?"

John T. Wheeler
Professor of Business Administration and Associate Dean of the Graduate School of Business
University of California
Berkeley

Holmes, Arthur W., *Auditing Principles and Procedure*, Fifth Edition (Homewood: Richard D. Irwin, Inc., 1959, pp. xiv, 883, Price $7.50).

In this edition of his popular auditing text the author has introduced new material and has made changes of considerable substance. The most important new ma-

terial is on statistical sampling terminology, concepts, and methods, and on the audit of data produced by electronic computers. The statistical sampling material is presented chiefly in the chapters on the audit of original records. Here different types of samples are described and such statistical concepts as acceptable quality level, sampling risks, and statistical decision making are outlined. Reference is made to sources of published sampling plans and part of one published table of statistical sampling plans is reproduced. The author correctly states that statistical methods in auditing are still in the experimental stage, and does not attempt to do more than illustrate the possibilities. This material should at least make the student of auditing aware of the possibility of a more objective approach to audit samples than he otherwise would be and should assist in encouraging further experiment with statistical methods. The author has continued to use statistical terms in other chapters in referring to audit samples—terms such as "block sample" and "random sample," for example—and this will no doubt implant a more sophisticated attitude toward audit sampling rather firmly in the students' minds, which is desirable, and only their due in view of the increasing applications in the field.

The material on audit of electronic data systems describes the basic processes of various types of these systems, desirable internal control for them, and audit requirements and procedures required. This material is also included in the discussion of the examination of original records.

The practice of presenting audit standards formulated by the author as well as those published by the AICPA is continued in this edition, but the author has wisely labelled those expressed by the AICPA so the reader can distinguish them. This is desirable in view of the fact that the concern of the Institute is to restrict standards to broad objectives and the fact that accountants may differ on more specific requirements.

Users of former editions should be pleased to note that the specific sample sizes given previously in such a way as to suggest a fixed rule are offered now as illustrative only with the statement that "these sample sizes are not intended for universal use."

Other features of the text are continued, frequently in improved form. The author indicates that he has reduced the amount of work required in many of the problems. A long audit problem and a practice set are available as before. The illustrative set of working papers, separately bound and prepared in realistic style, continues to be an attractive and useful feature of the text.

LAWRENCE L. VANCE
Professor of Accounting
University of California at Berkeley

ARNOLD W. JOHNSON and EVROUL S. GERMAIN, *C.P.A. Problems Complete Review Course* (Boston: Allyn and Bacon, Inc., 1959; vol. 1, Problems, 301 pp., $6.95; vol. 2, Solutions, 359 pp., $6.25)

At least six other C.P.A. problems books have come from major publishers since World War II. Consideration of their principal features brings out the following salient points.

1. The number of original problems as contrasted with those taken from C.P.A. examinations varies considerably. For the most part the proportion of original problems by their authors is relatively small, but ranges from none to 100 per cent.
2. Solutions are set out in separate volumes in four instances; loose leaf format is used in three of these.
3. For the most part, time estimates are given for each problem; these are sometimes stated as ranges.
4. In a majority some solutions are annotated, i.e., accompanied by some textual explanation.
5. Problems are grouped by subject matter in all but one of the six books.
6. Practice is quite varied as to inclusion of questions and the number of questions.

How does this seventh postwar C.P.A. problems offering compare with its predecessors on these points?

1. As with most of the others, most of the problems are not original; 30 to 144 did not come from C.P.A. examinations; one C.P.A. examination problem was modified.
2. The solutions volume is separately bound in a paper back, hence is not loose leaf. The problems volume is in a conventional hard binding.
3. Time estimates for each problem are stated as a range. This practice has been followed on the uniform C.P.A. examination since 1954.
4. For the most part, solutions are not annotated; occasionally a brief comment not essential to the solution itself appears.
5. Problems are grouped under 16 topical headings followed by a miscellaneous group.
6. As the title would indicate, there are problems only, no questions.

A breakdown of topical groupings of problems and the range of time estimates for each follows:

Topic	*Number of Problems*	*Total Time Estimates in Minutes*	
		Minimum	*Maximum*
Bonds	5	145	195
Budgets	6	330	460
Consignments	4	225	285
Consolidated Financial Statements	14	780	1,050
Cost Accounting	14	1,065	1,500
Funds, Statement of Source and Application of	9	585	790
Governmental and Institutional Accounting	13	830	1,185
Home Office and Branch	4	315	435
Installment Sales	6	265	360
Insurance	4	185	250
Inventory Valuation	12	550	755
Mergers and Reorganizations	7	480	635
Partnerships	10	400	545
Special Purpose Statements	6	340	480
Statement Analysis	5	200	295
Statement Preparation, Revision, Correction	14	810	1,055
Miscellaneous	11	4	600

With one exception, the selection of problems seems to reflect the emphasis by types manifest in recent uniform C.P.A. examinations. Properly, the number of income tax problems has been minimized. Since this topic changes so rapidly, parts of any substantial coverage of it would be foredoomed to immediate obsolescence.

For the most part, shorter problems predominate as shown in the following tabulation based on *minimum* estimated solution times.

Minimum time	*Number of Problems*
20 minutes or less	11
25 to 40 minutes	35
45 to 55 minutes	28
60 to 70 minutes	40
75 to 85 minutes	14
90 to 100 minutes	13
Over 100 minutes	3
	144

The three longest problems are estimated to require from 120 to 165 minutes; the next ten from 100 to 135 minutes.

A four page introduction includes some facts about the uniform C.P.A. examination and a listing of commonly used textbooks indicated as valuable for reference purposes.

One of the principal merits of this work is its convenience of use. As has been noted, the problems are grouped. Each problem section is preceded by a blue page on which the content, or emphasis of each problem, is detailed together with the estimated ranges of solution times. The convenience would have been further enhanced had the solutions volume (which is bound differently anyway) been produced in loose leaf form.

CHARLES T. ZLATKOVICH
Professor of Accounting
The University of Texas

EDWARD S. LYNN, *Auditing Wisconsin School Districts* (Madison: University of Wisconsin, 1959, pp. 71, Price $1.15).

The Bureau of Business Research and Service recently published the booklet, "Auditing Wisconsin School Districts" which should be of interest to auditors and governmental accountants outside the State of Wisconsin as well as those within the State. Chapter II, "The School District as a Client," Chapter III, "Audit Checklist," and Chapter IV, "The Audit Report" will be found to be excellent reference materials by practicing accountants engaged in auditing school districts and by the student interested in the subject area.

J.S.L.

PERRY MASON, SIDNEY DAVIDSON and JAMES S. SCHINDLER, *Fundamentals of Accounting*, 4th Edition (New York: Henry Holt and Company, Inc., 1959, pp. xi, 910, Price: $7.50).

This fourth edition of *Fundamentals of Accounting* seeks to achieve a balancing of context as between the following sets of areas:

1. Financial reporting in contrast to compilation of financial information.
2. Analysis of detailed and statistical data by management, as distinguished from the analysis of summary financial statements by external groups, such as investment analysts, stockholders, and extenders of credit.

Regarding the first two areas, emphasis is on professional standards and practices rather than on the detailed procedures inherent in the recording function. Individual chapters are devoted to the accounting principles applicable to major balance sheet groupings, classified by chapters as follows: inventories, fixed assets notes and interest, long-term liabilities and investments, stockholders' contributions, and corporate retention of income. A stimulating chapter is devoted to the determination of net income, and the distribution of operating income in the forms of interest, income taxes, and dividends.

In deference to the recording function, separate chapters are devoted to journalizing and specialized journals, and another to ledgers. The material has been so arranged as to permit the omission of these last two chapters. Thereafter, individual chapters are devoted to the major transaction types; namely, cash, sales, and purchases. Each chapter covers in detail the variety of transactions embraced in the major type. Individual chapters are devoted to adjusting entries, the work sheet and the mechanics of closing and the preparation of financial statements.

With respect to the second set of areas, accounting for management is treated first from the standpoint of how the data are assembled. An early chapter on general accounting for manufacturing is followed by several later chapters on the principles of cost accounting, inclusive of standard costs. How the data are used is demonstrated in a new chapter which presents such managerial tools as the analysis of variances from standard costs, flexible budgeting, profit charts, and the marginal income or contribution concept.

The analysis of financial statements from the standpoint of outside parties is covered in separate chapters on the statement of funds and financial statement ratios. The coverage here is also, of course, serviceable to management at the top level. Consolidated statements and annual stockholders' reports are covered as related topics of interest to outside parties.

The text contains 565 questions and short problems for the purpose of providing extensive and thorough coverage for all students regardless of major. An additional 178 laboratory problems of the longer variety satisfy the more intensive requirements of accounting majors. All questions and problems are new or completely revised. An interesting feature is the use of "true and false" and "multiple choice" questions. This reviewer found the questions and problems to be thought-provoking, as well as saturating the field.

The coverage is thorough, and yet written in a clear and concise style. The text is also flexible in that chapters may be omitted without disturbing continuity or development. Illustrations in the way of journal entries and financial statements are ample. The authors, for-

tunately, have not fallen prey to a common disease of recent authors—of subordinating the exposition of accounting to that of management decision-making. The managerial aspects are not to be minimized; the point here is merely that an elementary accounting text must not overlook its responsibilities to financial accounting.

This reviewer found particularly stimulating the chapters on income and its distribution, managerial uses of cost data, the statement of funds, consolidated statements, annual reports to stockholders, and the analysis and interpretation of financial statements.

In this reviewer's opinion, this work accomplishes the stated objective of the authors—to give an understanding of the uses and limitations of financial reports by describing the methods and alternative procedures of accumulating, classifying, and recording accounting data, and the various bases of valuation. The student mastering this work will be admirably prepared for the advanced accounting courses that follow.

JOSEPH A. MAURIELLO
Professor of Accounting
New York University—Graduate School
of Business Administration

JOHN J. W. NEUNER AND ULRICH J. NEUNER, *Accounting Systems*, Third Edition (Scranton: International Textbook Company, 1959, pp. xi, 577, Price $9.25).

In the preface to the Third Edition of *Accounting Systems*, the authors state that the book is "essentially a college textbook on the design, installation, and revision of accounting systems. . . . " They also express the hope that the book provides "an up-to-date and complete treatment of the subject of internal control" as well as "expanded material in the field of mechanical devices, electronic data processing, and integrated data processing."

The subject matter is divided into two parts: Part I, Principles and Procedures of Accounting Systems Work: and Part II, Applied Accounting Systems and Procedures. Part I follows what might be described as the conventional approach to the study of accounting systems. It begins with a general discussion of the nature of systems work. In subsequent chapters consideration is given to the following areas: the preliminary survey, design and use of business papers and forms, books of original entry, books of final entry, basic mechanical equipment, basic principles and practices of internal control, accounting and control of purchases and inventories, payrolls, sales, cash, punched-card accounting methods, integrated data processing, electronic data processing, and the accounting system installation report.

Part II (Applied Accounting Systems and Procedures) consists of five chapters: discussing the systems, transactions, and records of (1) mercantile and trading concerns, (2) manufacturing businesses and (3) service-type companies. Under the first of the foregoing categories particular emphasis is given to the systems work for department stores and small retailers. In the section dealing with manufacturing businesses there is brief consideration of the special systems problems of bakeries, building contractors, bottlers of beverages, brewers and distillers, textile mills, coat and suit manufacturing firms, and magazines and newspaper publishers. In the third classification special attention is given to accounting systems and procedures for stock brokerage firms and for commercial banks. Less detailed consideration is given to the following types of service enterprises: hotels, restaurants, municipalities, insurance and brokers, commercial laundries, and motion picture and other theaters.

Also included in the book are six appendixes in which are found the names and addresses of a substantial number of associations and firms in the following categories:

1. Trade Associations Providing General Accounting Manuals
2. Trade Associations Providing Cost Accounting Manuals
3. Trade Associations Providing for Uniformity of Accounting and Classification
4. Firms Manufacturing or Selling Accounting Forms or Systems
5. Manufacturers of Machines and Other Mechanical Devices Used in Accounting Work
6. Manufacturers of Digital Electronic Data Processing Equipment and Integrated Data Machines.

The order of materials considered in the first fifteen chapters is characterized by the authors as the "basic chronological approach to the teaching of the subject of accounting systems." They are of the opinion that it is "easier for the undergraduate student at college to learn from the chronological sequence of the procedures, than from the more mature, top-management viewpoint of looking at the end product and then developing procedures to fit it." (p. 11). This order of presentation will not be completely satisfying to those who believe that students need to see the clearly defined objectives (information needed for various reports, internal control, etc.) before they can intelligently consider the available alternatives (procedures, forms, etc.) for achieving these objectives. Those instructors who favor the latter approach will find it necessary to postpone the use of the text until the objectives have been clearly established. Once this has been done, however, the material in the text should prove useful in the study of systems construction or revision.

Readers who are familiar with previous editions of this book will appreciate the degree to which the authors have succeeded in integrating the discussion of internal control with the discussion of systems for the various functional classifications of enterprise activity such as sales, purchases, payrolls, etc. Also improved is the presentation of electronic data processing and integrated systems.

The overall qualities of the book are such that it merits careful consideration by accounting instructors when choosing a text for a course in accounting systems. It also should prove to be a worthwhile addition to the accounting libraries of accountants engaged in the construction or revision of accounting systems.

KENNETH B. BERG
Professor of Accounting
University of Washington

Research Department, American Institute of Certified Public Accountants, *Accounting Trends and Technique*, Thirteenth Edition (New York: American Institute of Certified Public Accountants, 1959, pp. vii, 270, Price: $18).

"Thirteenth annual cumulative survey of the accounting aspects of the annual reports of 600 industrial and commercial corporations to which are added excerpts from and comments upon unusual accounting treatments found in 500 additional reports" has been released. "The reports analyzed are for those with fiscal years ending within the calendar year 1958." The survey, as usual, presents numerous comparative tabulations which show the current trends in corporate reports in "the various types of financial statements presented, their form and terminology, and the accounting treatment accorded the transactions and items reflected in the statements."

This annual survey is useful to financial officers, practicing accountants, teachers, and students. The careful preparation of this material has made it a very useful reference and should be available in college libraries for student and faculty research as well as in business and professional libraries.

J.S.L.

Economics

Joe S. Bain, *Industrial Organization* (New York: John Wiley & Sons, Inc., 1959, pp. xviii, 643, Price $9.25).

This textbook, in the area of economics known as industrial organization, takes a point of view external to the business enterprise. It is not a book on the internal organization of the individual business, but rather on the organization and operation of the enterprise sector of capitalist economies, particularly the economy of the United States.

The term "industrial" as used in this book connotes business enterprises exclusive of banking or other financial firms. The primary unit of analysis is the industry or competing group of firms, rather than the individual firm or the totality of firms in the economy. The author analyzes these business enterprises in their function as suppliers and sellers, or buyers, of goods and services produced by enterprises in our economy.

The major thrust of the book is thus its central concern with the market behavior of business enterprises. The author departs significantly from the traditional pattern of industry-by-industry description, and from standard government-and-business discussions of monopoly and competition. Instead, he employs an analytical, cross-sectional treatment in which substantial amounts of empirical data, derived in large part from his own research, are used to illuminate a definite theoretical framework. This framework is presented early in the book, together with the state of economic theory generally relevant to the main theme. This plan of organization makes the subsequent chapters on environmental conditions, business concentration, product differentiation, and market structures and conduct more meaningful. The student is helped to develop for himself an integrated set of ideas about the market behavior of business organizations.

The appearance of the book is timely in view of the extent to which its subject matter and its analytical presentation are in tune with the increasing emphasis on upgrading education for business administration. High quality instructional materials are increasingly important if schools of business administration wish to escape the stigma of descriptive vocationalism recently asserted by prominent critics. Professor Bain, however, has done more than merely provide a useful textbook. He has made possible a clearer recognition of the pervasiveness and the importance of the marketing complex in our society and of the nature of market performance of business enterprises. Further, he has clarified the nature of the external environment of the business enterprise. The result of these contributions is a better view of the economic system itself and, even more important, provides a view of what an enterprise is and does. For these reasons this work should be carefully studied by not only students of economics but by all students of business administration as well—a special interest of the latter being the impact of the external environment on the internal organization and administration of the business enterprise.

Although intended as a textbook for both one and two semester courses in industrial organization as given in departments of economics, the book can be recommended to a variety of readers. Economists with teaching and research interests in industrial organization will appreciate its innovations, its relating of theory to empirical evidence, and its up-to-date material. The general reader seeking a better understanding of the market behavior of business enterprises can derive many useful insights from it. Undergraduate students will find the level of difficulty challenging but not impossible, yet the book will not seem trivial to graduate students.

The quality of writing is better than average (or mean), with the chief fault (or weakness) being the economist's habit of excessive (that is, tiresome) use of parenthetical expressions (ostensibly to clarify [but actually to complicate] the writing).

Dalton E. McFarland
Professor of Business Administration
Michigan State University

Dexter Merriam Keezer and Associates, *New Forces in American Business* (New York: McGraw-Hill Book Company, Inc., 1959, pp. xiii, 278. $4.75).

Dr. Keezer and his associates, in their exciting little volume, have looked ahead for a decade in the perspective of the postwar economic developments and trends. The basic issue is whether the growth and relative stability of the past 15 years may be expected to continue or whether there must be at some stage a substantial setback in accordance with traditional experience and doctrines. Right from the start, the authors make it entirely clear that they intend to give sharp answers. "We are business, rather than academic, economists

. . . the business economist . . . works for people who must make decisions." He "enjoys no . . . leeway for detached expression." "It is out of habit bred of business necessity that we state our conclusions affirmatively" (p. viii).

The basic conclusion is that growth and stability similar to that of the past 15 years will be continued through the next decade. We shall avoid a major letdown (not minor short run ups and downs of small percentage magnitude) because of important new forces in the post-world war mix in our society.

The most important new force is the forecast that private business investment will continue to expand and will be maintained at a new high level instead of running its course into the traditional "bust" of the "boom and bust" cycle. The reasons include (1) the increasing proportion of capital equipment in production because of the reduction of the work week and the need for greater productivity, (2) the high and continuing rate of obsolescence, (3) the increasingly heavy capital demands to overcome raw material or environmental deficiencies (as water and air pollution and population congestion), and (4) the continuing and expanding technological impact of the sizable and growing expenditures on research and development. Capital investment will be adequate to the needs for a number of reasons, including the development of longer range planning of business investment, and the assurance of balanced sources of investment funds. A further important reason for the availability of investment funds (accountants please take notice) will be the stimulus of high depreciation allowances in relation to replacement requirements.

The high level of private capital investment will be supported by spending in the large, growing, and changing consumer market. Strategic in this development will be the dual impacts of the bulging proportion of middle class incomes and the increased variety of goods and services derived out of product research and development. But consumer spending might not necessarily provide adequate market support since so much consumption will be optional, unless the "fateful art of marketing" is practiced at the equivalent level of efficiency. The authors admit that they feel a little more like "uncomfortable tourists" than "accredited experts" (p. 92) in dealing with this issue, but do conclude finally "there is substantial foundation for the expectation that in the years ahead the marketing sector of the American economy will successfully perform its crucial role in providing relatively sustained prosperity" (p. 117). Apparently, however, their optimism would be a little stronger if they felt assured that the "lagging art of civic salesmanship" (p. 115) were better practiced in "creating a demand for more and better civic services (fine schools, clean streets, clean streams, clean air, etc.) as essentials of a society we can well afford" (Yes, *The Affluent Society* of Professor John Kenneth Galbraith is cited!).

An entire section of three chapters is devoted to the role of government as buyer (especially through defense expenditures), to governmental tax and fiscal policy, to governmental regulations (especially antitrust) and to the price inflation-economic growth issue. The authors tread more softly in some of these areas than elsewhere partly because of some hesitancy in judging how government—local, state, federal—may be expected to behave. Hence, support for the overall optimistic position was within certain judgments as to this behavior (p. 241). Included in the book also are brief dips into the farm problem ("Are agriculture's aches contagious?") and our overseas business relations. With respect to the former "We see no reason for worry that agriculture will drag the nation into depression" (p. 212). And, as for the latter, "trade will be bigger and freer" (p. 233).

As indicated the book is written for businessmen not for academic economists. But in the background, along with statistical data and interpretations of recent experience, lurks also the body of formal economic analysis and theory. And there is occasional reference to the academic scholars. Three instances particularly caught the reviewer's attention. First, is the specific reference to Alvin Hansen's dictum that a boom level of investment must run its course until further investment becomes unprofitable (p. 15). The authors contend that under the new forces, the level of investment can be maintained, except for minor variations. Second, there is reference to the Schumpeterian stress on innovation as a basic generative force (pp. 64, 65). It is felt that the scope and impact of innovation will be so large as to offset the instabilities inherent also in Professor Shumpeter's treatment of innovation as a more limited force. Thirdly, the influence of John Maynard Keynes on governmental budgeting and economic policy is noted with approval (p. 139), especially his success "in convincing not only a great many professional economists but also important governmental policy makers in Britain and in the United States, that government can profoundly affect the general level of economic activity." (p. 139).

New Forces in American Business is readable, forthright, provocative, and stimulating. Whether it is equally prescient, may be disclosed by 1970.

H. T. Grether
Flood Professor of Economics,
Dean, Graduate School of Business Administration
University of California

Edgar Lawrence Smith, *Common Stocks and Business Cycles* (New York: The William-Frederick Press, 1959, pp. vii, 226, Price $10.00).

In this new volume Mr. Smith presents the solar-economic theory of business cycles and offers an array of statistical studies to support it. The hypothesis, briefly, is that (1) changes in solar radiation cause changes in the environment of man, (2) these changes are reflected in weather changes, (3) human activities, health, and mental outlook are affected by changes in environmental conditions and these effects are reflected in certain statistical measures of economic activity, and (4) because of these relationships it is possible to find weather data that can be used as an index of probable human response to total environmental change. The author finds regular cycles in weather data and in economic time series that he thinks can be used to predict fluctuations in prices in the stock markets.

The first four chapters are grouped under the head-

ing, "A Backward Glance," and are devoted mainly to a defense of Smith's theory of common stocks as long-term investments published in 1924. He stresses the importance of cyclical timing and in this respect provides a background for his effort to find a way to forecast cyclical movements in stock prices.

The major part of the book begins with the "sunspot theory" of business cycles suggested by the British economist, W. Stanley Jevons, in the latter part of the nineteenth century. According to Jevons, variations in the number of sunspots produce corresponding variations in crops and thus cause business cycles. Smith broadens this idea considerably, holding that all changes in the quantity, content, and angle of solar radiation affect human activity. He points out for example, that changes in the content of ultra-violet rays in solar radiation have been found to increase or decrease by as much as 30 per cent as a result of solar disturbances.

One chapter is devoted to human response to weather changes, and several authorities are quoted to show that the moods of people are affected by the weather. One study cited is said to show that changes in the acid-alkali balance of the blood are largely conditioned by the meteorological environment and that changes in mood are associated with corresponding shifts in the blood pH.

The characteristic of solar radiations, and of their manifestations in weather, that makes the whole thing important for business and stock market forecasters is that changes are said to follow regularly recurring cyclical patterns. If one knows what the cyclical patterns are and also knows at any point in time where we are in a cycle, then forecasting is simply a matter of projecting the regular cycle to its completion.

The author presents a number of statistical studies that show regular cycles in weather data corresponding to cycles in pig iron production, retail sales, bank clearings, and stock prices. In Chapter 9, Smith combines two series of weather data by taking the average of the temperature range at New York in March and September and subtracting ten times the average rainfall in April and October. The resulting annual data are averaged by decennial year-groups for seven decades beginning with 1871. That is, the data for each of the first years in the decades are averaged, the data for each of the second years are averaged, etc., to produce an average figure for each year in the ten year series. The fluctuation in these average figures for a decennial period is shown to correspond closely to change in stock prices. The author endeavors to show that there are regular cycles in stock prices of 3½ years, 10 years, and 89½ years.

Mr. Smith's contention that there is periodicity in economic cycles is, of course, diametrically opposed to the conclusions of leading students of business cycles, such as Wesley Mitchell and Arthur Burns, who find that business cycles are recurrent but not periodic. In spite of all the charts and statistical exhibits presented by Smith, the case he makes is not impressive. It would be rash to deny that solar radiation affects human behavior, because we know all too little about it. And precisely for this reason, generalizations on how its affects people and on the periodicity of change seem highly premature.

It is not difficult to find fault with Mr. Smith's statistical data and statistical methods. The former are quite inadequate to measure whatever effect changes in solar radiation have upon the total environment. The latter seem designed to produce correlation rather than to test it.

The deposition of this reviewer is to bow with respect to a man who has made a distinguished contribution to the literature of investments and to express regret that his energies have in recent years been devoted to study and advocacy of a theory that has long been rejected by leading economists.

HARRY C. SAUVAIN
Visiting Professor of Finance
Stanford, California

WILLARD L. THORP AND RICHARD E. QUANDT, *The New Inflation* (New York: McGraw-Hill Book Company, Inc., 1959, pp. xi, 233, $5.00).

This is a study based upon some of the activities of the Merrill Center for Economics at Amherst University (Professor Thorp is director of this center). Twenty-three leading economists met for two weeks at the Merrill Center in July, 1958, and this study represents an effort to put into reasonable terms many of the problems raised in this conference although there is no thought that it represents in any sense the proceedings of the conference. The study also utilizes the comprehensive hearings of the Joint Economic Committee of Congress during the year 1958 as well as other recent studies touching upon this general problem.

In order to understand something of the topics covered, it is of interest to examine the general areas considered. These are not unique to any study of inflation, but rather much a summary of the core of thinking of most professional economists. They include (1) a study of the money supply, (2) a study of income claims, (3) an analysis of checks and balances in the American economy, (4) an analysis of growth and productivity, (5) a discussion of the international aspects of inflation, (6) a discussion of monetary and fiscal policies, and finally a summary of the more important influences in the economy. The focus of the study is a time period since World War II in the United States and special attention is paid to the problem of steadily rising wages and prices during periods of rising and declining business activity.

The authors have taken a pragmatic view of events and make no dogmatic suggestions for solutions. Some of the conclusions are of special interest. They seem to believe that there is a real prospect for continued creeping inflation in the United States, but they do not regard such a development as disastrous. Instead, they point out that consumer prices have been rising for the last sixty years and that mild inflation has its advantages as well as its disadvantages. They point out that inflation can be caused by demand-pull, income claims, structural friction, or international forces and that, further,

monetary and fiscal policies are probably not adequate for dealing with inflation from many causes. It is comforting to note that in their conclusions they reach this central idea, "Given American institutions, creeping inflation is not to become galloping inflation."

While the professional economist will perhaps not find very much that is really new in this volume, it will certainly bring him up to date on developments in this field. The book is clearly written and should be readily understood by even the intelligent layman or people who are not closely associated with analysis of inflationary developments. In the reviewer's opinion, it is a very useful contribution to the literature of the field.

Joe S. Floyd, Jr.
Associate Professor of Finance
University of North Carolina

Weintraub, Sidney, *Forecasting the Price Level, Income Distribution, and Economic Growth* (Philadelphia: Chilton Company, 1959, pp. xi, 123, Price $5.00).

This book may be considered another salvo in the continuing controversy over the nature, cause, and control of inflation. The author comes down squarely on the side of the wage-push thesis. Demand forces, except for one or two inconsistencies, are held to be without any direct influence.

Dr. Weintraub's principal thesis, the "law of the price level," is built on the idea that business sales may be stated as a multiple of employment costs; that is,

$$Z = kwN$$

where

Z = Business Gross Product
w = the average wage,
N = the number of employees (full time equivalent), and
k = the average mark-up

Z may be rewritten $P \cdot Q$, where P is the average price (or in index terms, price level) and Q represents real or physical output. Hence,

$$PQ = kwN$$

Now A, real output per employee, may be written Q/N. Then by simple algebra, the above identity may be written as

$$P = k \cdot w \cdot \frac{N}{Q} = \frac{kw}{A}.$$

If k is found to be constant, then P, the price level, depends solely on wage rates and productivity per worker. Dr. Weintraub, using Department of Commerce figures for Business Gross Product and Employee Compensation, computes k for the period 1929–1957, and finds it to be "constant," at least more nearly constant than most series with which the economist deals. Predicting the price level then is simply a matter of predicting output per worker and compensation per worker. Since the former quantity has grown at an average rate of about two per cent per year during the period under study, Dr. Weintraub concludes that gathering some information about wage increases in basic industries will furnish the necessary data for predicting the course of the price level.

Unfortunately, Dr. Weintraub's k is not constant; in fact, there is a rather pronounced downward secular trend, from 2.16 in 1929 to 1.87 in 1957. Since k is manifestly not constant, the argument quietly shifts to its stability relative to other economic series. There is nothing wrong with using such a term in a predictive model, *providing* that fluctuations will not lead to significant errors. Even if Dr. Weintraub's A and w terms could be predicted precisely (which, as we shall see, they cannot) fluctuations of two per cent or so in k (which, using the author's figures, are not at all uncommon) would lead to similar errors in the predicted price level. Two per cent or so is a tiny error in some connections, but most people would probably consider it a rather large error in connection with the price level. In the 28 year-to-year price level changes, 14 were two per cent or less. Since price level changes, rather than absolute levels, are the real targets of the analysis, it seems odd to treat as negligible an unexplained fluctuation which in half the cases examined is as large as or larger than the quantity being predicted.

Whatever remains of the predictive value of Dr. Weintraub's equation will not survive the difficulties in predicting output per employee, the A term in the equation. While it is true that this quantity has grown *on the average* about two per cent per annum, year-to-year movements are highly erratic and not at all amenable to use in short-run predictions.

The attempt, made in Chapter 7, to tie the price-wage analysis into some aggregate output equations of the Keynesian variety comes off rather badly. Nine equations and nine unknowns are developed, of which the first four deal with P, k, w, and A, and the last five with the familiar Keynesian variables of output, consumption, investment, the interest rate, and the money supply. Dr. Weintraub sets out to keep these two groups of equations quite separate, letting prices enter the latter group only as a parametric constant. However, the price level cannot be known until the first four equations are solved, and they cannot be solved without the last five, which cannot be solved without the price level. This is a true simultaneous system, after all, so that everything (prices included) depends on everything else, a conclusion fatal to the main idea of the book.

Limitations of space preclude any remarks about the remainder of the book, though there are ample grounds for criticism. One can only wish that Dr. Weintraub had been content to rest on his laurels justly earned by his solid and provocative *An Approach to the Theory of Income Distribution*, published in 1958.

John O. Blackburn
Visiting Assistant Professor
of Economics
Duke University

General

DANIEL D. MCCRACKEN, HAROLD WEISS, AND TSAI-HWA LEE, *Programming Business Computers* (New York: John Wiley & Sons, Inc., 1959, pp. xvii, 510, Price $10.25).

Programming Business Computers is aimed at people without mathematical background who are involved in or closely related to day-to-day applications of electronic computers to business data processing systems. It covers intensively business applications analysis, programming, and coding. Neophytes can learn the nature of the equipment and how to use it. People with limited experience in computer use can develop depth and breadth.

The coverage is broad for it is based on widespread experience of the authors with various application areas. Chapters 1–4 cover the nature of data processing, the concept and organization of files, and flow charting for application analysis. Chapters 5–12 cover the minimum coding required by a person doing actual programming or coding. The hypothetical computer involved is a compilation of features found on many machines. Chapters 13–19 deal with advanced topics essential for a good grasp and broad background in tape programming, machine-aided coding, sorting, estimating running time, rerun techniques, and random access storage. Some of these topics are unique within books. Chapter 20 deals with the steps in planning and programming computer applications and Chapter 21 with accounting and auditing problems associated with electronic processing.

Useful for a one or two semester course, there are many discussion questions and short problems. It is suggested that coding for a real computer might be substituted for the hypothetical one described. Such a substitution would do an injustice to the book because about one half of it deals directly or indirectly with the illustrative computer. The approach to coding is orthodox in that it first covers arithmetic operations. Address computation and loops and index registers are treated next. Input-output programming and verification of program accuracy round out the section to cover all the standard coding techniques. There are numerous examples with detailed explanations.

Machine-aided coding, whereby a programmer can exploit the work of others and, especially, a skilled programmers doing general purpose work, is put into proper perspective. Using the computer itself to prepare codes for routines represents an extension of the fact that computers can do clerical work better than people. Coding contains, in fact, a big element of clerical work. Such coding ranges from using programs already prepared and checked out to generating programs by merely specifying the parameters of particular situations.

The chapter on accounting, auditing, and data protection is of especial interest to accountants and auditors because of the intriguing aspects of invisible data and radically different processing methods. Factors of interest are the differences between computer accounting methods and others—centralization, flexibility, speed and timeliness, and treatment of errors and exceptions. High reliability of equipment system checks make the results more accurate than those obtained by other methods. Data protection insures that valuable data are not lost or damaged by environmental conditions or incorrect processing. Both manual and machine precautions are used to safeguard records until they are superseded by later rounds of processing. Audit techniques have, so far, not changed greatly and objectives have changed little, if any, despite earlier expectations of radical changes. Analysis of input data and output results can be used by auditors to evaluate the nature of computer programs without tracing them in detail—a task that may be near impossible. Auditors and accountants should participate in systems design to be sure that sufficient safeguards are included to exploit the potentialities of electronic computers.

Programming Business Computers is rich with the flavor of business data processing and some of the problems encountered by early users. It should be both a challenge and a pleasure to teach.

ROBERT H. GREGORY
Manager, Market Development and Planning
Sylvania Electronic Systems
Needham, Massachusetts

JAMES BRIAN QUINN, *Evaluating Research and Development, The Segmental Approach*, Tuck Bulletin #22 (Hanover: The Amos Tuck School of Business Administration, Dartmouth College, 1959, pp. 20, Price: Single copies free).

Industry is investing billions of dollars a year in research and development. Successful Research and Development programs are earning huge rewards. Inadequate research, on the other hand, "generally leads at least to enforced retrenchment—and may lead to extinction."

Dr. James Brian Quinn says that—every technologically based company owes it to itself to install the best possible system for planning, evaluating and controlling its research program.

And while this "best" system will of course vary in detail from company to company, every company needs to take a "segmental approach." One that seeks to apply "aggregate controls"—that is, to evaluate its whole program in one operation—is wasting its time and energies.

Further, quantitative measuring devices should be applied only to those segments of a program that really can be evaluated quantitatively, with every other segment judged strictly on a "qualitative" basis.

Dr. Quinn outlines and explains the segmental approach—and shows how some types of research can be evaluated quantitatively, while others can't be—in "Evaluating Research and Development," just published by the Amos Tuck School of Business Administration as Tuck Bulletin 22. Single copies are available free from Tuck School.

J.S.L.